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ABSTRACT

This document contains hearings on the oversight of the Census Bureau. The Hon. Robert Garcia (chairman of the subcommittee) presided. The statement of the Hon. Robert T. Matsui, a Representative in Congress from the State of California, indicated a concern regarding what definition should be used to reflect accurately the extent of poverty in America today. The Hon. James V. Hansen, a Representative in Congress from the state of Utah, offered, in his statement, a history of the definition of poverty. The statement of John G. Keane, Director, Bureau of the Census, covered past year activity highlights, preparation for the 1990 census, and remarks on efforts to value noncash benefits. His written testimony discusses automation, economic statistics, and confidentiality. The statement of William J. Anderson, Director, General Government Division, General Accounting Office, focused on the Census Bureau's preparation for the 1990 decennial census and the evalution of noncash benefits in measurement of income. Responses to follow-up questions are also included. (PN)

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OVERVIEW OF THE CENSUS BUREAU

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HEARING

BEFORE THE

SUBCOMMITTEE ON CENSUS AND STATISTICS

OF THE

COMMITTEE ON POST OFFICE AND CIVIL SERVICE HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

FIRST SESSION

APRIL 18, 1985

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OVERVIEW OF THE CENSUS BUREAU

THURSDAY, APRIL 18, 1985

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON CENSUS AND POPULATION,
COMMITTEE ON POST OFFICE AND CIVIL SERVICE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:30 a.m., in room 311, Cannon House Office Building, Hon. Robert Garcia (chairman of the subcommittee) presiding.

Mr. GARCIA. I would like to take this opportunity to welcome everybody to the hearing of the Census and Population Subcommittee on the oversight of the Census Bureau.

Today we are going to focus on two areas of the Census Bureau's activities: The 1990 decennial census and the evaluation of noncash benefits in measurement of income. The 1990 decennial census should not be a census of lost opportunities. We must ensure that decisions of the 1990 census are made and the plans carried out in a timely manner.

Since the 1980 decennial census, there have been tremendous advancements in technology. So that the 1990 census would be an efficient and cost-effective as possible, the Bureau should take advantage of these technological advances. The 1990 census must also be representative of our country's total population and especially of the minority population which, over the years, has been disproportionately undercounted.

The data from the decennial census make up the statistical foundation for public policymaking from local to national levels; therefore, it is crucial that the Bureau undertake the 1990 decennial census in the best way possible.

Another topic of paramount importance which we will be addressing today is the evaluation of noncash benefits in measuring income. According to the current methods used by the Census Bureau, the poverty rate would be significantly reduced if the value of noncash benefits is included in the income measurement.

This means that many of those that are considered poor today will not be poor tomorrow, even though there is no improvement in their quality of life. I represent what the Bureau, the Census Bureau, has determined to be the poorest congressional district in the country, and I am gravely concerned with the ramifications of the reevaluation of noncash benefits as income and its consequences.

I hope that we can establish a clear understanding of this today.

With that, I would now like to ask my colleague, Mr. John Myers, if there is any opening statement he would like to make.

Mr. MYERS. Mr. Chairman, no, I have no opening statement, but just welcome the witnesses here. It is a very important issue we have before this subcommittee today and we do appreciate the expert witnesses we have, both our colleague, Mr. Matsui, as well as the professional witnesses here as well. We are looking forward to your testimony.

Thank you.

Mr. GARCIA. With that, allow me to introduce my colleague from the State of California, a member of the Ways and Means Committee, who has been concerned over the years on the reevaluation of noncash benefits, who has asked to testify today. He has been a leader on this issue and I am delighted to invite Congressman Matsui of California to meet us today.

STATEMENT OF HON. ROBERT T. MATSUI, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. MATSUI. Thank you, Mr. Chairman, Mr. Myers.

I am pleased to participate today in this hearing on the Census Bureau activities in the 1990 census. I am particularly pleased that this hearing will allow us the opportunity to discuss formally the evaluation of noncash benefits, especially in light of the fact that the Census Bureau is in the planning stages for the 1990 census.

I commend you, Chairman Garcia, and Mr. Myers and other members of this subcommittee for your commitment to bringing the issue surrounding poverty measurements to the attention of the Congress and the American public.

I have two major concerns that I would like to share with the subcommittee in our discussion on the issue of poverty in America: One, what definition should be used to reflect accurately the extent of poverty in America today; second, and equally important, I am concerned that this administration will continue in its efforts to shield from the American people the true level of poverty in America.

First and foremost, how do we determine what constitutes poverty in America? It has now been some 20 years since we developed the Social Security Administration's crude index of poverty, which eventually became the official U.S. statistical definition that we now use. Yet, today, the same questions prevail: "Can poverty be actually measured? By what standards do we determine just how many poor people live in America today? Who should determine those standards?"

For a number of years, the method used by the Census Bureau to determine who is poor has been the subject of growing debate. Many critics argue that poverty thresholds are based on outmoded data which only estimate minimum food requirements for a family's survival. Such needs as clothing, shelter and medical care are not directly assessed.

Many others believe that the threshold should be based upon after-tax income and still others contend that in-kind benefits, such as food stamps, medical benefits and others, should be counted as income available to the poor.

Our current Federal poverty measure was developed in the 1960's as a standard on what is needed to get by, rather than as a

measure on how well off a person is compared to the average. Clearly, our economy and our society as a whole have changed drastically since President Johnson first embarked on the "war on poverty" some 20 years ago. Consequently, there are a number of difficulties that exist with the current method of measuring poverty, including how the minimum thresholds are set, the treatment of taxes, and the exclusion or inclusion of in-kind benefits from income.

Moreover, the question of the inclusion of in-kind benefits in the broader definition of income raises the question of the appropriateness of altering the poverty threshold to reflect more of what the real poverty level is.

While all of these problems are equally important, the great expansion of noncash benefits, such as medical care, food and shelter since 1965, has prompted the Congress to focus on the issue of the evaluation of these noncash benefits. At the request of Congress in 1980, the Census Bureau has proposed three different methodologies of quantifying their value: Market values: which considers the value of noncash benefits to be equal in cash to the private market purchasing power that would be needed to buy the same good and services that are sonsumed; Recipient values: which employs the concept of the beneficiary's own valuation of the benefits; and Poverty Budget Share Method, which limits benefit values to the observed consumption level of people near the poverty line. The manner in which the value of noncash benefits is represented depends heavily upon the purpose for which the poverty index is used and the way it is interpreted.

The index is used to determine the distribution of funding of Federal programs, setting eligibility requirements for basic needs-tested public assistance programs as the primary measure of the Nation's welfare.

Therefore, any redetermination of what the poverty index is or how it should be measured will have a very serious wide-range ramification on the Nation as a whole.

Let me illustrate. At the request of Congress, the Census Bureau has proposed three different methodologies of quantifying the value of noncash benefits. Depending upon which of these methods is used and which noncash benefits are included in the definition, the GAO estimates that the overall poverty rate in 1979 falls from a rate of 11.1 percent to as low as 6.4 percent. That is, the poverty rate declines by as much as 42 percent when the market value of noncash benefits is considered, depending upon which three methods you would use.

When the poverty budget share and recipient value methods are used, the poverty rate declines from 20 percent and 26 percent, respectively. Furthermore, although the GAO has revealed that there are a number of areas where the procedures used for each evaluation technique may be subject to technical error and that these may have a considerable distorting influence on poverty indicators and rates, the Census Bureau-proposed methods are currently being used by policy analysts.

Clearly, these methodologies proposed by the Census Bureau represent a nuts-and-shell game that gamble with our Nation's most vulnerable segment of society, that is, the poor.

Mr. Chairman and members of the subcommittee, this leads me to the second and perhaps most important concern that I raise. I believe this administration is attempting to wave the magic wand to make some 34 million Americans that are poor disappear. The administration is attempting to deceive the American public of the facts surrounding the extent of poverty in our Nation today. Time and time again, we have played political football with the administration as they attempt to redefine poverty in the United States under their own rules.

For example, in 1983, Dave Stockman testified before our Ways and Means Committee that the number of poor people in the United States was actually less than two-thirds of the officially reported figure presented by the Census Bureau, rejecting the reports of the Census Bureau that poverty was 14.4 percent, the highest level since the start of Johnson's antipoverty campaign. Mr. Stockman insisted that the actual rate was only 3.7 percent under the administration's definition of poverty, which would count government benefits as income.

I would like to share with the subcommittee what would be considered as above the poverty income under such definition. Under Mr. Stockman's and the administration's approach, Medicaid and Medicare are given so high a dollar value that some elderly persons have no cash income whatsoever and they would rise above the poverty line simply because they possess a Medicaid card. In other words, a Medicaid card is considered to have a monetary value greater than the poverty line, so that some elderly persons with Medicaid coverage are not considered to be poor, even if they are penniless and destitute.

Clearly, such a definition of poverty defies logic and common sense, yet this is the definition that Mr. Stockman used when he argued that the official poverty count substantially exaggerates the actual number of Americans that would be considered poor.

It is evident that instead of trying to resolve the problem of poverty in our country through strengthening the social safety net, the administration has time and time again indicated its desire to devise new statistical measures to hide the undiminished needs of the poor. Indeed, Mr. Stockman told us on the Ways and Means Committee at that same hearing, and I quote: "We are marching forward as a society to reduce the degree of poverty if we measure it correctly." That is an exact quote in his testimony.

I fear that the American public is being misled by this Pied Piper approach.

Again, this attempt to redefine the definition of poverty was illustrated during an oversight hearing last year. Last year, the Census Bureau announced that at the request of the administration, a panel of eight expert economists had been chosen by the Office of Management and Budget to review the Bureau's work on poverty measurement and to take technical recommendations on how to calculate noncash benefits in determining the poverty rate.

This panel of eight experts was asked to review only those types of measures, such as in-kind benefits, which statistically decrease the number of poor. No thought was given to evaluating alternative poverty measures, like using after-tax income or increasing the

poverty thresholds which would reveal an increase in the number of poor Americans.

More importantly, this session was to be closed to the public and no outside input by Congress or interested parties was to be permitted. It was only after I wrote the Census Bureau, urging them to open the meeting, arranged for nearly 60 of our colleagues to sign a subsequent "Dear Colleague" letter, which we sent to the Census Bureau, and joined in a lawsuit asking the court to direct the Bureau to open the meeting, that this session was finally canceled.

Certainly the importance of this issue and its vital economic and moral impact deserves the attention of more than just eight individuals in a closed meeting. It is my view that the questions concerning poverty income and how to measure them are too important to take place outside the public's view. Such discussion must occur in an open forum with adequate opportunity for all interested parties to comment and provide their respective positions on the issues.

The Census Bureau has tentatively scheduled such a technical conference to be held later this year. I would like to make note, however, of the fact that they have agreed to hold a conference with representatives not only from the technical expertise area, but from the entire community of persons with a strong interest in the collection, dissemination, and interpretation of income and poverty statistics.

Perhaps through such a forum, we can begin to discuss the complexities of these issues, and I would at this time like to commend the Census Bureau for really making an attempt to open the process up and include many people besides experts who are vitally interested in this issue. I looked at a tentative list of potential invitees that they provided me and it was a list that included a wide spectrum of people from all philosophic points of view on this issue. So they have made a good-faith, honest attempt to deal with this problem and the problems that we had expressed to them last year.

The questions concerning the definition of poverty too often are viewed as purely technical and best left to the experts, but policymakers must respond to the need for a more comprehensive framework for understanding what constitutes poverty and how to mitigate it. We cannot allow this administration's view of the poor to become institutionalized through self-serving attempts to redefine poverty as Mr. Stockman proposed in October of 1983.

Members of Congress and other decisionmakers must acknowledge that these technical matters have profound social, moral, and economic ramifications. Congress must fully understand all of the different alternatives and ramifications of each approach in assessing the measurement of poverty itself.

To assure that Congress possesses sufficient information to conduct a searching and substantive debate on the best way to measure poverty, it seems clear that an impartial and objective assessment must, in fact, be compiled.

Toward this end, I have introduced legislation which proposes to create a bipartisan congressional commission whose job it would be to devise a yardstick by which to calculate poverty. During its 2

years proposed life, this commission will compile a comprehensive list of options for measuring poverty.

Once the options were developed, the commission would conduct open hearings to receive public comment and criticisms on which of these possible approaches could be used. Upon completion of the review, the panel would then send its final recommendations for defining poverty to the Congress of the United States, where ultimately the decision should be made in view of the fact that individuals, local and State governments are so dependent upon what that definition is.

I sincerely believe that the entire question of how we should define poverty obviously needs to be carefully and thoroughly examined, but perhaps more importantly is the fact that the GAO itself, in evaluating the current methodologies proposed by the Census Bureau, has reported that any major change in policy and decisions regarding the eligibility and distributions of funds as a result of any redefinition must be delayed until those methods and this issue can be more comprehensively examined.

The panel that I am proposing in the proposed legislation will examine how current guidelines were developed and whether they adequately reflect the nature and extent of poverty in the 1980's. In addition, the proposed commission would evaluate all current efforts, particularly by the U.S. Census Bureau, to value noncash benefits. Until such time that Congress can receive this information and study it, I feel that neither the administration nor Census should make any changes in the approach to the definition of poverty in this country.

Despite past problems, many of the poor have slipped through the social safety net. We certainly cannot allow more Americans to be injured by statistical holes in the net, and more importantly, we must resume our national effort to eliminate poverty through effective and humane measures.

I would like to thank you, Mr. Chairman, Mr. Hansen, and Mr. Myers, for giving me the opportunity to testify today. I would be happy to answer questions if any members of the subcommittee should desire to pose them.

Mr. GARCIA. First, let me thank you, Congressman Matsui, but before I get into any questions, I would like to announce that my colleague from Utah has just joined us. He is the ranking minority member of this committee. There may be something he would like to add.

Mr. HANSEN. Thank you, Mr. Chairman. Just let me apologize for being late. I was in another committee meeting and couldn't get out and had some questions I had to ask there. I apologize to the committee.

I appreciate our colleague from California's excellent testimony that he has given. Possibly after you finish, I would have some questions.

If I could, I would like to submit my opening statement for the record.

Mr. GARCIA. OK, without objection.

[The statement of Mr. Hansen follows:]

STATEMENT BY HON. JAMES V. HANSEN

Mr. Chairman I am pleased to join with you today for this update on the Census Bureau's preparations for the 1990 Decennial Census.

The GAO appears to have some serious concerns about the Census Bureau's ability to adequately meet their 1990 responsibilities in a timely and cost-efficient manner. Considering the controversies that surrounded the 1980 results I believe that it is most important that we determine what the Bureau has done to resolve the problems that occurred in 1980 and whether they are on schedule for the 1990 census.

I would also like to include for the record, a history of the definition of poverty, that I believe will be helpful in our discussion of noncash benefits.

EXHIBIT G
Circular No. A-46
Revised

DEFINITION OF POVERTY FOR STATISTICAL PURPOSES

For the years 1959-1968 the statistics on poverty contained in the Census Bureau's Current Population Reports, Series P-60, No. 68, shall be used by all Executive departments and establishments for statistical purposes. For the years 1969 and thereafter, the statistics contained in subsequent applicable reports in this series shall be used.

A number of Federal agencies have been using statistical series on the number of persons and families in poverty, and their characteristics, in analytical and program planning work. The basis for these series has been the classification of income data collected by the Bureau of the Census in accordance with a definition of poverty developed by the Social Security Administration and revised by a Federal Interagency Committee in 1969. This definition provides a range of income cutoffs adjusted by such factors as family size, sex of family head, number of children under 18 years of age, and farm-nonfarm residences.

The Bureau of the Census series continues the Social Security Administration definition for the base year, 1963, except that the differential between poverty levels for farm and nonfarm families is reduced from 30 percent to 15 percent. Annual adjustments in the Census series are based on changes in the average annual total Consumer Price Index (CPI) instead of changes in the cost of the U.S. Department of Agriculture's Economy Food Plan.

The establishment of this standard data series does not preclude departments and agencies from more detailed analyses or from publication of tabulations for specialized needs although, where applicable, totals must agree with totals published by the Bureau of the Census. Other measures of poverty may be developed for particular research purposes, and published, so long as they are clearly distinguished from the standard data series.

The poverty levels used by the Bureau of the Census were developed as rough statistical measures to record changes in the number of persons and families in poverty, and their characteristics, over time. While they have relevance to a concept of poverty, these levels were not developed for administrative use in any specific program and nothing in this Circular should be construed as requiring that they should be applied for such a purpose.

(No. A-46)

UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, D.C. 20233

OFFICE OF THE DIRECTOR

Poverty, as an official concept, originated in the mid-1960s with the Johnson Administration's "War on Poverty." In 1964, the Social Security Administration released a study that estimated the number of persons below the poverty line and defined poverty as a series of income thresholds, based on nutritional needs, for families of varying size and composition. In the original study, the Social Security Administration used data from the Census Bureau's Current Population Survey.

In 1969, the Bureau of the Budget (now the Office of Management and Budget) formalized the statistical definition of poverty in the enclosed Circular No. A-46. This circular incorporates the findings and recommendations of the Federal Interagency Committee on Income and Wealth, and establishes the Census Bureau as the collector of poverty statistics for the Executive Branch. It, also, in defining poverty for statistical purposes, made minor modifications to the original Social Security Administration definition. Enclosed is a copy of Current Population Reports, Series P-23, No. 28, "Special Studies, Revision in Poverty Statistics, 1959 to 1968," which describes these modifications.

Beginning with the data for 1979, the definition of poverty was again slightly modified in response to the findings of another Federal Interagency Committee on Income and Wealth. Enclosed is a copy of the notice published in the Federal Register of December 28, 1981. Except for this slight modification, the official poverty statistics are still prepared under the provisions of the original circular.

The enclosed copy of the latest Census Bureau poverty report, Current Population Reports, Series P-60, No. 147, "Characteristics of the Population Below the Poverty Level: 1983," includes a detailed explanation of the poverty definition and survey procedures along with the published data.

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*/ The reports referred to were retained in the official hearing record.

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Mr. GARCIA. Congressman Matsui, I think you answered the question I had for you when you talked about your bill on poverty and its definition. Just let me say that I am appreciative, and I think many Members of Congress are appreciative that you have been in the forefront of this issue.

You had a chance to look at the list of some of the participants in the upcoming conference. There have been some additional names that we have submitted to the Bureau of the Census. I will get into that question and answer with Dr. Keane, but I would just like you to know that we will keep you fully informed as this committee progresses on this question. I am hopeful that you will continue to participate and work with us, as I know you will.

Mr. MATSUI. Thank you very much, Mr. Chairman.

Mr. GARCIA. Are there any questions any our colleagues would like to ask? Mr. Myers? Mr. Hansen?

Mr. HANSEN. Mr. Chairman, if I may.

Mr. GARCIA. Mr. Hansen of Utah.

Mr. HANSEN. I appreciate your comments. Let me just say, I would appreciate at a later time if you would give us some equitable approach in using noncash benefits in defining poverty. If you could give us an outline of that, I am sure it would be helpful, especially for a new member of this committee.

Mr. MATSUI. Thank you, Mr. Hansen. If I may just say that I would not presume to be an expert on how to define these noncash benefits. I would be very happy to work with the subcommittee on how to approach the subject, but I feel that the issue is so complex that it really should be left up to the experts and those in the administration, and third, those that are involved with poverty programs in the United States.

It could very well be, and I might just add this now, because I want to be as objective and fair as I can in my approach to this issue, that a redefinition is necessary, and perhaps some noncash benefits should eventually be included in the ultimate definition of poverty. At the same time, we all know that since 1979, actually the last 2 years of the Carter administration and the first 2 years of the Reagan administration, the payroll tax on individuals has increased at a rapid rate. The largest segment of both individual income taxes has occurred in the payroll area, and as a result of that, those at the poverty threshold are now paying much more in terms of a tax burden than they were in 1979.

Perhaps that should also be included in the definition of poverty. In other words, after-tax income, rather than pre-tax income, and so there should be a number of factors placed in whatever definition is ultimately arrived at.

Second, once a definition is arrived at, then we have to determine what the threshold level should be and that is a very difficult issue to deal with. The current definition is based upon the number of dollars it takes to feed a family on a monthly basis multiplied by three. It is a very arbitrary number, but it was devised in the 1960's and our indexes and measurements were very crude in those days.

We are still using that measurement today and perhaps it really is time for those of you that are in the position to make these changes begin to look at how we should redefine it because it does

have an impact, both in terms of the individual recipient, but more importantly to some extent on cities and counties and State governments who receive moneys from the Federal Government based upon that definition.

Thank you very much.

Mr. GARCIA. Thank you, Congressman Matsui.

We will now hear from the Director of the Bureau of the Census, Dr. John G. Keane. Before you start, Dr. Keane, I would just like to say that my staff has gone over your statement. It is extensive and I think, well put together, but obviously, if we had to listen to your written testimony we would be here for the next 3 days. So, needless to say, I will include your entire statement as submitted to us for the record, and as we talked about before the hearing started, you please summarize so that we can get into some questions.

I appreciate your taking time out of your very busy schedule to be with us, Mr. Keane.

STATEMENT OF JOHN G. KEANE, DIRECTOR, BUREAU OF THE CENSUS, ACCOMPANIED BY PETER A. BOUNPANE, ASSISTANT DIRECTOR FOR DEMOGRAPHIC CENSUSES, BUREAU OF THE CENSUS; AND WILLIAM P. BUTZ, ASSOCIATE DIRECTOR FOR DEMOGRAPHIC FIELDS, BUREAU OF THE CENSUS

Mr. KEANE. Thank you, Mr. Chairman.

Before I formally start, I should like to identify my two colleagues. On my left is William Butz. Mr. Butz is Associate Director for Demographic Fields in the Census Bureau. On my right is Peter Bounpane, who is Assistant Director for Demographic Censuses.

I appreciate your opening comment.

I welcome this opportunity to present an overview of developments at the Census Bureau. In my remarks today, I will summarize or simply refer to many of the points made in the written testimony, a copy of which you obviously have.

I will be ready to answer your specific questions about my oral or written testimony at the conclusion of my remarks.

My testimony is in three general parts. As the subcommittee requested, I will begin with some general highlights of activities of the past year or so and then I will turn to our preparations for the 1990 census. I will conclude with some remarks on our efforts to value noncash benefits.

The last year has seen progress made in many areas of the Census Bureau. My written testimony covers three general highlights: Automation, economic statistics and confidentiality. I will cover just one of those areas today; economic statistics.

The Census Bureau has made a number of important improvements in our economic statistics program. We conduct literally hundreds of nationwide economic surveys ranging from monthly surveys based on relatively small samples to major censuses taken every 5 years. Some of the resulting monthly reports, such as the housing starts and retail sales, are principal economic indicators. In addition, Census Bureau economic statistics are a primary source of data used in developing major economic series such as the

GNP, the Index of Leading Economic Indicators, and unemployment estimates.

This past year, we have more than doubled the number of industries covered by our annual survey of the service sector. The Shippers Export Declaration is being revised to incorporate new data items and increase compatability with other countries' shipping documents. In addition, we are participating in efforts to harmonize the International Commodity Classification System.

The Consolidated Federal Funds Report, which shows the distribution of nearly all Federal expenditures at the local level, now presents even greater geographic detail for the large Federal programs.

Now, Mr. Chairman, I would like to turn from general highlights to the 1990 census of population and housing. The Census Bureau has embarked on—indeed, it is in the midst of an ambitious program of consultation, testing and experimentation to discover ways to improve the 1990 census. I do not have time to talk about every 1990 planning issue. Therefore, I will summarize my testimony on the subjects mentioned in your March 18th letter: Automation, questionnaire content and census coverage. I will also add a brief status report on our 1985 test censuses.

For the 1990 census, we have identified a number of areas that are candidates for automation. The TIGER geographic support system and automated address control file, computer-assisted telephone interviewing, computer editing and coding of questionnaires, better tabulation and publication systems and more automated cost progress and management reports. These are prime candidates for automation in 1990.

One of the most promising ways to improve the census and our biggest challenge is to convert the data on the questionnaires to a computer-readable format earlier in the census process. This approach is essential if we are going to release data products sooner. It will help improve accuracy and hold down costs. Also, computer records of questionnaires could serve as backups to the originals in case they are inadvertently destroyed, as happened in Bedford-Stuyvesant during the 1980 census.

So, our approach to automation planning is to move the data conversion operation closer to the data collection operation, both in time and in location. The issue to be decided is what level of decentralization is feasible, effective and sufficiently reliable for the 1990 census.

We must also determine the best technology for converting the data to computer-readable format. The choices for 1990 are basically between three technologies or a combination thereof. We can continue to use the microfilm-to-tape, or FOSDIC process like 1980, but with newer and better equipment; or we can try to eliminate the microfilming step and read the questionnaires directly, as college aptitude tests are processed, using optical marks recognition technology; or we can have clerks enter that data by keying, a more traditional but flexible data conversion technique.

Many automation decisions are intertwined with other decisions. FOSDIC equipment, for example, requires a higher degree of centralization than data keying equipment. The equipment chosen for converting questionnaire data to computer-readable format will

help determine the basic appearance of the form to the public and the ease with which the questionnaire can be completed. A decision on the equipment to be used can affect the content and size of the questionnaires. We also must consider the reliability, maintainability, availability and cost of the equipment.

Lastly, we must consider the staffing requirements imposed in numbers and technical sophistication.

The Census Bureau will make the major decisions regarding automation systems by September 1986. This timing is crucial. Long lead times are required for procurement of automated data processing equipment, but an earlier decision would not allow us to test these options as thoroughly as possible during our 1985 and 1986 test censuses.

Since the purpose of the census is to meet data needs for at least a decade, no part of census planning is more important than selecting the questionnaire content. Census information is collected because it is constitutionally or otherwise legally mandated. It also is collected because others have substantiated their need for information and this information can be gathered only by the census.

In determining which questions to ask, the Census Bureau consults with thousands of data users in numerous forums to ensure that it asks the most useful questions. The Census Bureau is in the middle of a wide-ranging process of consulting other Federal agencies, data users, as well as other interested organizations and persons about these future data needs.

I believe we will find that there are many more legitimate questions than we reasonably can ask in the census. One of our criteria for planning the 1990 census is to strike the proper balance between our needs for information and the length of the questionnaire.

This balance is necessary because the public cooperation essential for a successful census could be underminded by a questionnaire that the public finds too lengthy.

Mr. Chairman, my written testimony describes the criteria that we will use to decide what questions to ask. I will answer any questions about the criteria after completion of this oral statement.

I will add one additional observation on census content issues. Although the law requires us to report to Congress on content, first in 1987 and again in 1988, it is important to begin discussions now with this committee and Members of Congress on this important part of the 1990 census planning. Thank you for giving us this opportunity.

I want to turn next to a very important topic: census coverage. A major thrust of our planning efforts for the 1990 census is directed toward obtaining the most accurate count possible. We have a carefully managed program to develop, test, evaluate and refine a variety of specific techniques and technologies to increase the accuracy of the 1990 census. One of the most troublesome problems in past censuses is the differential that has occurred between the count of white and minority populations.

A major goal for the 1990 census is to reduce the undercount of minorities. We already have begun efforts to establish working relationships with representatives of minority groups. Through these relationships we hope to evaluate the activities we used in 1980

and to improve the counts of minority populations in 1990. In particular, we hope to discover and develop new effective procedures to encourage participation by minority persons.

All these efforts are detailed more completely in my written testimony.

I would like to add, Mr. Chairman, how much the Census Bureau appreciated your efforts to encourage participation in the 1980 census and we welcome your offer to help in 1990.

Ideally, coverage in the 1990 census would be so good as to render academic the issue of whether to adjust the counts. Such an ideal census is unlikely to occur, so we have embarked on a two-pronged strategy. On one front we will try to improve the coverage provided by the basic census counts. At the same time, we will work to improve our methods of measuring coverage.

Before the census, we will establish a specific set of criteria that will determine whether it is statistically reasonable to adjust the census counts. At this time, we are not sure what coverage will be in 1990 or whether we could make a statistically reasonable adjustment, so we must work at both approaches simultaneously.

In our 1985 and 1986 test censuses, we will test ways to increase the accuracy of our coverage measurement techniques. Our improvements in the area of automation and data collection techniques are aimed at making the census simpler and faster. More time should be available for us to review the accuracy of the basic count and to make appropriate corrections, if necessary. In fact, the 1986 test census will include an examination of the feasibility of an accelerated census schedule into which we integrate rapid coverage measurement studies.

Mr. Chairman, I am submitting for the record a detailed status report as of last Friday, April 12th, of our 1985 test censuses. To summarize, delivery of the questionnaires proceeded on time. The processing of questionnaires is going relatively smoothly. We are in the midst of following up on those who did not return forms by mail.

As expected, the Jersey City test presents more problems than Tampa, due to low mail response rates and difficulties of field work, recruiting and training. We have increased our hiring to handle the work caused by the low mail response rate in Jersey City. We have made very conservative assumptions about the production rates of our enumerators in Jersey City due to the difficulties found in enumerating older, less prosperous, intercity areas. We are closely monitoring the situation through automated cost and progress reports. Finally, to learn from this experience, we have been interviewing those who did not respond by mail to discover their reasons and to seek solutions for the future.

Mr. Chairman, you also asked me to discuss the status of our efforts to value noncash benefits in measuring income. I will begin by describing the background of this program.

A basic mission of the Census Bureau is to produce statistics on the distribution of income among persons and families. During recent years, Congress and other data users have recommended that the Census Bureau supplement its series on money income by collecting and publishing information on the receipt of noncash

benefits. In 1982, the Census Bureau issued the first two reports on noncash benefits.

One report showed the characteristics of households and persons receiving selected types of noncash benefits. The other report was published in response to legislative language. That language directed the Secretary of Commerce to include in survey estimates of the effect of in-kind benefits on the number of families and individuals below the poverty level.

I think it is important here to at least parenthetically note that the definition of poverty is issued by the Office of Management and Budget.

The Census Bureau has recently issued a report showing 1983 data on the characteristics of households and persons receiving noncash benefits. During the past year and a half, we updated estimates of the number of persons in poverty when income is defined to include the value of certain noncash benefits. Our research work is preliminary. As we do for the decennial census program, the Census Bureau is attempting to develop a forum that will allow the data user community to give us their advice and comments; in this case, on the valuation of noncash benefits.

We are planning to hold a conference later this year on the measurement of noncash income. The Census Bureau will prepare and distribute proceedings of the conference and make them available to the subcommittee.

Let me highlight our intentions for this conference so there can be no misunderstanding. The primary purpose of the conference is to bring together a representative group of income data users to explore with the Census Bureau ways to measure the recipiency and value of noncash benefits. We will make every effort to ensure that the attendees represent not only those persons with technical expertise, but all those interested in income and poverty statistics, including Members of Congress and representatives of minority communities.

We will give conference recommendations serious consideration when deciding on future activities. The conference will not address the issue of the definition of poverty. Let me reiterate: by law, the responsibility for determining statistical standards, including the poverty definition, rests with the Office of Management and Budget.

Mr. Chairman, that concludes my remarks. I would like to add that I and the rest of the Census Bureau look forward to working with you and other committee members on all our activities. I especially want to reiterate how pleased I am you are visiting our Jersey City and Tampa test sites. We hope you can visit future test censuses as well.

I am ready to answer yours and your colleagues' questions.

[The statement of Mr. Keane follows:]

STATEMENT OF THE DIRECTOR OF THE BUREAU OF THE CENSUS
JOHN G. KEANE
Before the Subcommittee on Census and Population
Post Office and Civil Service Committee
U.S. House of Representatives
April 18, 1985

I welcome this opportunity to present an overview of developments at the Census Bureau. My testimony will be divided into three sections. I will begin with some general highlights of activities of the past year or so. Then I will turn to our preparations for the 1990 census. I will conclude with some remarks on our efforts to value noncash benefits.

First, I have a very brief personal observation. My first year as Director of the Census Bureau has fully confirmed my expectations about the talent and dedication of the staff and the importance of our statistical work. This is a time when the Congress and the Administration are counting on us to become more efficient and to exercise great prudence in the spending of public funds. We are doing that. There is a sense of excitement at the Census Bureau, enthusiasm about new developments, and determination to solve problems and improve the way we conduct our programs. Mr. Chairman, the Census Bureau is an invaluable part of the Federal establishment. I am very proud to be associated with it.

I. General Highlights

One of the ways we are becoming more efficient is through the increased use of automation. We approach automation carefully, just as we approach anything new. There is far too much at stake to jump too quickly and then blunder. A few examples will illustrate what opportunities exist.

First, our entire central data processing system is able to deliver results more quickly and at lower cost. Second, we are beginning to use microcomputers and commercial data base software in our regional offices to automate processing activities common to several surveys. We plan to have this capability in all 12 offices this spring, and then extend these new procedures to additional surveys. Third, we have completed developmental work on computer assisted telephone interviewing. We are now testing and evaluating these new procedures in actual data collection at a new facility we established in Hagerstown, Maryland. Fourth, we are beginning to explore the potential of other computer assisted data collection techniques: Interviewers will try using portable microcomputers to compile and update mailing lists, receive assignments, transmit data electronically, and perhaps even conduct interviews. Here again, we will begin with a modest effort, scheduled for later this year, to test this technology in the compilation of address lists. Finally, we have made a major commitment to automate our geographic work, primarily for the 1990 census, but also, eventually, in support of all Census Bureau programs.

Each of these steps in the long run can produce major gains in the work of the Census Bureau. We can obtain more results for the same dollar invested. We are able to reduce the errors that occur in both census and survey work. The same employees who formerly did tedious clerical work can be trained to use automated equipment, and their work may become more interesting. Finally, we hope to produce data more quickly.

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We are taking advantage of communications technology. Last August, we established a new service, CENDATA, for data users. It makes selected data available for online retrieval. CENDATA contains a variety of statistics from various censuses and surveys, press releases, and reference information about newly released reports. All of this information is in that public domain. It also is available in printed reports for users who do not have ready access to computer terminals.

The Census Bureau has made a number of important improvements in our economic statistics program. We conduct literally hundreds of nationwide economic surveys, ranging from monthly surveys based on relatively small samples to major censuses taken every 5 years. Some of the resulting monthly reports, such as Housing Starts and Retail Sales, are principal economic indicators. In addition, Census Bureau economic statistics are a primary source of data used in developing major economic series such as, the Gross National Product, the Index of Leading Economic Indicators, and the Bureau of Labor Statistics' unemployment estimates.

Planning for the 1987 economic and agriculture censuses is well along. We intend to increase the use of automated procedures there as well. In fact, one of the best stories about the benefits of automation comes from the 1982 economic censuses. Thousands of publications have been released up to 10 months earlier than for the previous censuses. Much of this improvement can be credited to increased automation in processing the data.

There are two developments in our trade statistics program that will bring about major improvements in those data. First, the Shipper's Export Declaration is being revised to increase compatibility with other countries'

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shipping documents. Second, we are harmonizing our export and import classification systems with the international commodity classification system. This has been an interagency effort in this country, and an international effort as well.

Other important program changes include an expansion of our coverage in the service sector. This sector, although large and growing, has significant data gaps. We have more than doubled the coverage of the Services Annual Survey to 45 industries and industry groups. In addition, numerous research projects have been undertaken to address conceptual issues, classification problems, and data user needs. For the next fiscal year, the Census Bureau has requested funds for further expansion into industries where deregulation has resulted in a severe loss of statistical data.

Reports on Minority and Women-Owned Businesses provide data that are useful at all levels of government for assessing minority participation in economic activity. We will publish reports covering black and women owned businesses later this year. We will publish Hispanic and other minorities reports early next year.

The Census Bureau is responsible for producing the Consolidated Federal Funds Report which shows the distribution of nearly all Federal expenditures by state, county, and sub-country areas. Recently, we have worked with all of the major Federal agencies to identify methods and mechanisms for more precise coding and tracking of those Federal funds which are allocated to state government agencies for subsequent redistribution within the state. As a result of this effort, the reports for fiscal year 1984, which were released on March 29, 1985, present greater geographic detail at the county level for the large Federal programs.

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One other important development to mention is that we are reviewing our entire set of policies and procedures concerning the confidentiality of information. The Census Bureau and the Nation are very fortunate that the census code has very strict provisions on confidentiality. We are especially fortunate that Congress has sustained these provisions over many years and that the courts have upheld them when challenged. Nonetheless, this is an area where our collective attitude is one of constant vigilance, especially as the use of computerized data files expands, and the pressures increase to release larger amounts of microdata to the general public and to data users. As a result of the reviews conducted thus far, we are establishing a working group to examine all practices regarding confidentiality, to develop comprehensive guidelines, and to ensure consistent practices. A major part of this effort will focus on disclosure-avoidance techniques for microdata files, tabulations, and publications. Additionally, we are approaching more systematically the issue of how the public perceives confidentiality. We know that not all respondents believe our pledge of confidentiality. We also know that information-age developments that are well publicized can create perceptions that may have adverse effects on our ability to do our job regardless of the actual facts. We believe there can be a vital connection between the rate of cooperation we receive from respondents and general public attitudes toward survey work and toward the government. Unfortunately, this connection is not easily measured or understood. We are favored now with a very high rate of cooperation. The climate of opinion, however, can change rapidly, as we all know, and possibly affect future public cooperation significantly.

II. The 1990 Decennial Census

Now, Mr. Chairman, I would like to turn our attention from these general highlights to the 1990 Census of Population and Housing.

Because I do not have time or space to cover every 1990 planning issue, in today's remarks I will concentrate on the subjects mentioned in your March 18 letter to me: automation, questionnaire content, and census coverage. I also will add a brief status report on our 1985 test censuses. But first let me make some general comments.

The Census Bureau has embarked on, indeed is in the midst of, an ambitious program of consultation, testing and experimentation to discover ways to improve the 1990 census. We have carefully, completely, and honestly examined our activities during the 1980 census. We have begun major tests earlier in this decade than in the last decade.

As you know from your previous experience as Chairman of this subcommittee, the general outline of the census is determined long before it becomes a popular subject for the television news shows. The census is like a large ocean liner that must begin its turn long before it encounters an obstacle. We have tried to set the course for this census in a detailed management plan. This plan establishes several hundred planning milestones that, like channel markers, stretch across the entire ten year planning horizon. I would like to extend an invitation to the subcommittee and to the other witness this morning, the General Accounting Office, to visit us at the Census Bureau for a complete presentation of our management plan for the 1990 census. I think you will find such a presentation useful in understanding the Census Bureau's schedule of activities and decisions leading up to and through Census Day, 1990, all the way to the final release of census data products.

Automation for 1990

I have already spoken about the increased use of automation throughout the Census Bureau. Automating many of the census tasks performed clerically during the 1980 census will help us to reach our goals for the 1990 census, particularly those related to the timely release of data products. With the advances in the electronic information industry, many possibilities exist for further automating the census process to save time and money and increase accuracy. I want to assure you that the Census Bureau is well on the way toward examining and choosing among these possibilities.

We have identified a number of areas that are candidates for automation. Let me say a few words about our automated geographic support system -- TIGER -- [Topologically Integrated Geographic Encoding and Referencing System] and how it will help us in 1990. TIGER will integrate the geographic materials that were produced in separate operations in 1980. To accomplish this goal, this system will also allow us to produce our maps and other geographic products and services from one consistent data base.

We are also planning to have a computerized address control file that can be updated by computer and against which questionnaires can be checked-in automatically. In fact, such a system is actually working in our 1985 test censuses. This improvement will affect the accuracy, speed, and efficiency of the census process significantly.

Other areas we are investigating to see if we can and should introduce automation into the census are: computerized editing of the questionnaire for completeness and consistency, computer assisted telephone interviewing, automated coding of write-in answers, improved tabulation and publication systems, and more automated, and therefore timely and accurate cost, progress, and other management reports.

One of the most promising way to improve the census, and one of our biggest challenges, is to convert the data on the questionnaires to a computer-readable format earlier in the census process. This approach is essential if we are going to release data products sooner. It will help improve accuracy by allowing computerized editing. Finally, it will hold down costs. For 1980, the data conversion process did not begin until after we closed the census district offices and shipped their questionnaires to one of the three sites for computer processing. For the 1990 census, we want to begin converting data more or less simultaneously with the collection phase. This early start will allow more time for review and correction and will allow the computer to help with questionnaire editing. Also, computer records of questionnaires could serve as backups to the originals in case they are inadvertently destroyed as happened in Bedford-Styvesant during the 1980 census. So, our approach to automation planning is that the closer we can move the data conversion operation to the data collection operation, both in time and in location, the more efficient the total process will be. The issue to be decided is how close we can make these two operations. What level of decentralization is feasible, effective, and sufficiently reliable for the 1990 census?

We are looking at two broad scenarios for accomplishing this early data conversion. Under one scenario, we would have separate locations for data collection and processing, as in 1980. Here, the processing offices (possibly as few as 3 or as many as 80 in number) would receive the mail-returned questionnaires from the public, check them in automatically, convert the data to machine-readable format, and perform automated editing of the questionnaires. Several hundred district offices would be responsible only for data collection activities. Under the second scenario, there would be several hundred combined

district/processing offices, which would carry out both automated processing activities and field follow-up work. Combinations of these two scenarios are also possible.

In addition to deciding which of these broad scenarios to implement for 1990, we must also determine the best technology for converting the data to computer-readable format. In 1980, the Census Bureau captured the data from the questionnaires after clerically coding write-in responses, and then reading the microfilm with a mark-sensing device (the FOSDIC system). The choices for 1990 are basically between three technologies (or a combination thereof). We can continue to use the film-to-tape FOSDIC process (as in 1980, but with newer and better equipment). We can try to eliminate the microfilming step and read the questionnaires directly as college aptitude tests are processed (using optical mark recognition [OMR] technology). Or we can have clerks enter the data by keying (a more traditional, but very flexible data capture technique).

I should mention we are testing current OMR technology in our 1985 test census in Tampa, Florida. Discussions and negotiations are being held with potential suppliers of yet to be developed data conversion equipment such as prototype OMR machines or microfilm cameras that would be designed to meet unique census requirements. In particular, we want to see what might be available for testing in 1986 because we believe such field tests are necessary to evaluate, accurately, the suitability of data processing equipment. Our philosophy is to make our choice in 1986 from proven -- not just promised -- equipment and systems. Right now, we plan to test data keying and a decentralized film-to-tape process in 1986. Our 1986 test plans complement our 1985 plans, in which we are testing OMR technology and a more centralized processing office approach.

This choice of data conversion technologies is intertwined with other decisions. FOSDIC equipment, for example, requires a higher degree of centralization than data keying equipment due to its costs, operating characteristics, and maintenance requirements. The equipment chosen for converting questionnaire data to computer-readable format will help determine the basic appearance of the form to the public and the ease with which it can be completed. A decision on the equipment to be used can affect the content and size of the questionnaires. We also must consider the reliability, maintainability, availability, and cost of the equipment. Lastly we must consider staffing requirements imposed by the equipment both in numbers and technical sophistication.

In our 1986 test censuses, we will be specifically examining questionnaire design issues. Although final decisions on the content of the questionnaire will not be made until 1987 and early 1988, we plan to examine closely the effects of different questionnaire designs on respondent cooperation and data quality. We will use a variety of techniques to examine these effects, including small focus groups. Our working assumption for processing purposes is that although individual questions may be dropped or added, the basic short and long form questionnaires will be similar in 1990 to the 1980 questionnaire. In particular, during 1986, we will be looking at the design of the mailing package and the total design and format of the questionnaire. We want to explore how much flexibility in questionnaire and mailing-package design each data conversion technique allows before making our automation decisions. For 1990, we hope to make significant improvements in this area.

The Census Bureau will make the major decisions regarding automation systems by September 1986. This timing is crucial. Long lead times are required for procurement of automated data processing equipment. But an earlier decision would not allow us to test these options as thoroughly as possible during our 1985 and 1986 test censuses.

There is a sense of excitement at the Census Bureau about these automation possibilities, but some words of caution should be added. Whatever systems are developed and chosen must be simple, because they will be operated by a temporary work force with minimal training. The systems must be fully tested, proven to be reliable and maintainable, and essentially "fail safe" to avoid crippling breakdowns. The equipment must not be unreasonably expensive. We also will examine whether it will be useful or obsolete after 1990. Our testing plans are designed to evaluate the automation possibilities against these criteria.

Questionnaire Content

Since the purpose of the census is to meet data needs for at least a decade, no part of census planning is more important than selecting the census questionnaire content. Census information is collected because it is constitutionally or otherwise legally mandated. It also is collected because Federal agencies, state and local governments, business groups, demographers and economists, community organizations, and others have substantiated their need for information, and that this information can be gathered only the census.

Many decisions about census content must be made in the next 2-3 years. Indeed, the Census Bureau is now planning our National Content Test for

1986, our main vehicle for testing new questions and question wordings. By law, the Census Bureau is obligated to report to Congress on the subject areas for the census by April 1, 1987, and on the actual questions that will be asked by April 1, 1988.

In determining which questions to ask in the census, the Census Bureau consults with thousands of data users in numerous forums to ensure that we ask the most useful questions. We determine the uses of existing census data and identify current needs not being met; however, future data needs must also be anticipated. The Census Bureau is in the middle of a wide-ranging process of consulting other Federal agencies, data users, as well as other interested organizations and persons about these future data needs. More than 70 local public meetings are scheduled across all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands, to get advice and suggestions from all sorts of census data users. The Office of Management and Budget has convened the Federal Agency Council to coordinate overall agency advice and counsel. The Council's work is being supplemented by ten inter-agency working groups that are addressing data needs in particular subject areas such as transportation and housing.

I believe we will find that there are many more legitimate questions than we can reasonably ask. One of our criteria for planning the 1990 census is to strike the proper balance between the user needs for information and the length of the questionnaires. This balance is necessary because the public cooperation essential for a successful census could be undermined by questionnaires that the public find too lengthy.

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In making the final choices, then, about which subjects to include in the questionnaire, we will follow six standards:

First, only required data will be collected - those needed for Constitutional or legislative reasons, those needed specifically to administer Federal, state, and local programs, and those needed to describe the American population and housing stock.

Serond, the census must meet small-area data needs. If the data are needed for small geographic areas (for example, census tracts, with an average population size of 4000), then the census is a good tool. If the data are required only for larger areas (such as the Nation, regions, states, and large metropolitan statistical areas), sample surveys might be more appropriate.

Third, the census is also more appropriate than a nationwide sample survey for collecting data for small and dispersed population groups. A nationwide sample surve would not have the coverage from these groups to yield any statistically significant data about them.

Fourth, the questions must lend themselves to self-response and not impose unrealistic requirements for data processing. The questions generally will be answered directly by respondents without an enumerator present. So, they must be easy to understand. In addition, the responses must be of a type that are translatable, with reasonable efforts, to machine-readable form.

Fifth, the 1990 census form will not contain any question that is intrusive, offensive, or widely controversial. The Census Bureau needs public cooperation for the census to work. It cannot risk losing that cooperation through improper questions.

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Sixth, many of the subject areas to be asked about in 1990 will have been asked in 1980 and earlier censuses. Answers to previously asked questions can provide trend data needed in the 1990s on vital socioeconomic and housing characteristics. This criterion does not mean that just because we asked a question in the last census, it will be asked again. We will consider, however, the need to provide continuity and comparability between data gathered during each census.

As you are aware, Mr. Chairman, one of the decisions to be made for 1990 concerns the wording and placement of the race and Spanish origin questions on the short and long forms. It is difficult to ask Race and Spanish origin questions and obtain valid answers. Although our 1980 results were good, they were not without problems. For instance, many Hispanics did not mark any racial designation but wrote in Hispanic or Puerto Rican or Mexican American. We are looking for ways to solve those 1980 problems and still meet the needs of our data users. The Census Bureau asks the opinions of data users and other interested people on this issue at its local public meetings across the Nation and meetings with Federal agencies and other groups. Our approach is to test variations to the 1980 version thoroughly. We plan such tests in a special-purpose test this summer in Chicago, in the 1986 National Content Test, and in our 1985 test censuses. Let me assure you, however, we will not change the 1980 version of the race and Spanish origin questions without strong reasons supported by demonstrable results from our testing program.

I will add one additional observation. Although the law requires us to report to Congress on content first in 1987 and again in 1988, it is important to begin discussions now with this Committee and members of Congress on this important part of 1990 census planning. Thank you for giving us that opportunity.

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Census Coverage

I want to turn next to a very important topic, census coverage.

A major thrust of our planning efforts for the 1990 census is directed toward obtaining the most accurate count possible. We have a carefully managed program to develop, test, and evaluate a variety of specific techniques and technologies designed to increase the accuracy of the 1990 census.

There will probably never be a perfect census that counts every resident, but one of the most troublesome parts of the undercount is the differential that has occurred in past censuses between the count of white and minority populations. One of our major goals for the 1990 census is to reduce the undercount of minorities. We already have begun efforts to establish working relationships with representatives of minority groups. In these relationships we hope to evaluate the activities we used in 1980 and improve the counts of minority populations in 1990. In particular we hope to discover and develop new, effective procedures to encourage participation by minority persons.

Mr. Chairman the Census Bureau appreciated your efforts during the 1980 census to encourage participation. I welcome your offer to help in 1990.

We both know that an effective outreach program is essential if we are going to improve the coverage of minorities in the census. Indeed, widespread public cooperation is essential for the conduct of an accurate census.

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The public must understand the important uses of the census, trust in the confidentiality of the data, and act on this understanding and trust. Specifically, they must include themselves in the census by mailing back their census questionnaires or cooperating with census enumerators. Therefore, the Census Bureau is working to assure that its outreach efforts for the 1990 census will be even better than those for 1980.

The promotion program for the 1980 census was highly successful. The Advertising Council chose an advertising agency to conduct a general public service campaign free to the Census Bureau (except for certain administrative costs). These public service announcements were worth about $38 million in "air time" and advertising space. The Census Bureau made many other special efforts to encourage public support for the census. Some of these promotional efforts were designed specifically to reach minority racial and ethnic populations to help reduce coverage differential among these groups and the rest of the population.

We have already made one major decision relating to outreach for the 1990 census: we believe that the benefits of a campaign under the auspices of the Advertising Council outweigh the benefits of a paid campaign. Therefore, we have approached the Ad Council to coordinate and provide a public service advertising campaign for the 1990 census. They have accepted us as a client. As good as the 1980 general publicity campaign was, however, we and the Ad Council think it could be better if more time were available for planning and testing themes and messages and the delivery techniques. With that in mind, the Ad Council has agreed to participate in our testing program beginning with the 1986 test censuses.

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We have also taken steps to consult with minority representatives and groups in our planning. For the 1980 census, the Census Bureau formed three census advisory committees to represent specific minority populations: one each for Blacks, Hispanics, and Asian and Pacific Islanders. We conducted regional meetings to obtain advice from the many tribal groups of Native Americans. In planning the 1990 census, the Census Bureau will again draw upon the expertise of similar advisory committees. We have proposed establishing committees to represent four minority population groups: Blacks, Hispanics, Asian and Pacific Islanders, and American Indians and Alaska Natives. The Secretary of Commerce has approved their creation, and I hope that these committees will be able to have their first formal meeting this summer.

In the meantime, the Census Bureau has held three meetings on an ad hoc basis with leaders of various minority organizations. We held a joint meeting with representatives of minority groups in January of 1984. Many minority representatives were invited to a conference on 1990 census outreach planning in September of last year. In December, Census Bureau officials discussed the selection of 1986 test sites with an ad hoc group of minority representatives in Phoenix.

For the 1980 census, our representatives also participated in more than 50 meetings of national minority organizations. In addition to these contacts with national groups, the Census Bureau created the Community Services Program, in which we hired staff specifically for their knowledge of their communities. They contacted local leaders and organizations who, in turn, could encourage their constituencies to cooperate with the census. These various activities contributed to the overall success of the 1980 census.

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Our 1990 plans call for building on our 1980 achievements in this area. We will be targeting hard-to-enumerate areas earlier in the decade for special awareness projects through schools, churches, other religious organizations, businesses, and other community-based organizations. Our local community activities will be coordinated with and supported by the advertising campaign and other publicity in the local print and electronic media.

We will also establish good working relationships and a number of "joint ventures" with local officials. I will just mention two of these. In 1980, we had a Local Review Program for the first time, which allowed officials to review and comment on the census counts before our district offices closed. We also have established a network of State Data Centers to distribute our data products. By working closely with local officials, we can make this joint venture even more successful in the next census.

Finally, in addition to improving our outreach efforts, we will examine all the coverage improvement techniques we used in 1980 and keep or improve the ones that were effective, drop the ones that were not, and develop new ones. For example, the various postal service checks on our mailing lists and the Census Bureau's precanvass activity used in the 1980 census added about 7.2 percent of the population that was counted. In the precanvass, census enumerators updated and corrected the precensus address lists by canvassing their assigned area and adding or deleting units or structures from the list, as appropriate. They also made sure that housing units were listed in the correct geographical area. We will certainly repeat that operation. We also are testing ways to improve it.

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I would like to mention one other potential source of improvement to the census process in difficult-to-enumerate areas such as parts of large cities where mail-return rates were low in the 1980 census. That is the two-stage census. In the first stage, the U.S. Postal Service would deliver short-form questionnaires containing basic questions to all addresses. Later, census takers would visit those addresses that did not respond by mail to collect the basic information. In the second stage of enumeration, the Postal Service would deliver long-form questionnaires to a sample of addresses. Again, census takers would visit those housing units that did not respond by mail to collect the sample data. In 1980, the collection of basic and sample data was accomplished in one stage.

This two-stage approach might be one way to allow a quicker count of people and their essential characteristics, such as age, race, and sex. Redistricting, reapportionment, and some, but not all, formula-grant program needs would then be more quickly satisfied. If the mail-response rate is increased by a shorter form, answers to these basic questions may be more accurate as well. Our 1980 experience, however, was that long form mail return rates were not much lower than short form rates. Unfortunately, in a two-stage census public cooperation, coverage of individuals and data quality in the second stage may decrease. Comparability with basic population data obtained in the first stage may be lessened. The cost of contacting many households twice could be prohibitive. We are testing the two-stage census approach in Jersey City, New Jersey this year. That city is just the sort of difficult-to-enumerate area where we think the two-stage census may have the greatest chance of helping. We should find out whether the advantages of a two-stage census outweigh its disadvantages when we have evaluated our Jersey City test results.

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Mr. Chairman, I would now like to turn from the issue of coverage improvement to the related issues of coverage measurement and adjustment of the census counts. Ideally, coverage in the 1990 census would be so good as to render academic the issue of whether to adjust the counts. Such an ideal census is unlikely to occur. We have embarked on a two-pronged strategy. On one front, we will try to improve the coverage provided by the basic census counts. At the same time, we will work to improve our methods of measuring coverage. Before the census, we will establish a specific set of criteria that will determine whether it is statistically reasonable to adjust the census counts. At this time, we are not sure what coverage will be in the 1990 census or whether we could make a statistically reasonable adjustment. So, we must work at both approaches simultaneously.

After each census since 1950, the Census Bureau has attempted to measure the coverage of the population, i.e., how well we did in counting the people. While statistical techniques are not available to measure coverage precisely, these studies have consistently shown, as I mentioned already, that some groups are undercounted at a disproportionate rate to the rest of the population. For the 1980 census, the Census Bureau had two major programs to measure coverage of the population -- demographic analysis and the post enumeration program. These programs provide a general idea of the degree of coverage in the 1980 census, but they do not provide the Census Bureau with accurate enough information to adjust the 1980 census data for the disproportionate undercount.

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Thus, the issue of adjustment will be a major concern in planning the 1990 census. The Census Bureau will continue to examine the use of different undercount measurement and adjustment techniques to determine whether we can develop a valid procedure for adjusting the census counts. We have created a new organizational unit to coordinate, monitor, and analyze our undercount-related activities. We have also requested a review of this issue by the National Academy of Sciences' Committee on National Statistics, a panel of technical experts whose final report is expected within the next several months.

The 1985 test census in Tampa is testing ways to increase the accuracy of our coverage measurement studies. The 1986 test censuses will also seek to improve the accuracy of our coverage measurement techniques. Our improvements in the areas of automation and data collection techniques are aimed at making the census simpler and faster. More time should be available for us to review the accuracy of the basic count and to make appropriate corrections if necessary. In fact, the 1986 test census will include an examination of the feasibility of an accelerated census schedule into which rapid coverage measurement studies are integrated.

Mr. Chairman, I am submitting for the record Attachment A, a detailed status report as of April 12 of our 1985 test censuses. To summarize, delivery of the questionnaires proceeded on time. The processing of questionnaires is going relatively smoothly. We are in the midst of following up those who did not return forms by mail. As expected, the Jersey City test presents more problems than Tampa due to low mail response rates and the difficulties of field work, recruiting, and training. We have increased our hiring to handle the work caused by the low mail return rate in Jersey City. We

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have made very conservative assumptions about the production rates of our enumerators in Jersey City due to the difficulties found in enumerating older, less prosperous, inner city areas. We are closely monitoring the situation through automated cost and program reports. Finally, to learn from this experience, we have been interviewing some of those who did not respond by mail to discover their reasons and seek solutions for the future.

III. Valuation of Noncash Benefits

Mr. Chairman, you also asked me to discuss the status of our efforts to value noncash benefits in measuring income. I'll begin by describing the background of this program.

Program Background

A basic mission of the Census Bureau is to produce statistics on the distribution of income among persons and families. During recent years, Congress and other data users have recommended that the Census Bureau supplement its series on money income by collecting and publishing information on the receipt of noncash benefits.

The impetus for this recommendation has been the rapid growth in government and employer-provided noncash benefits. Federal expenditures on assistance for low income persons are concentrated in programs that provide noncash benefits. During the period 1974 to 1982, the combined outlays of the two major cash assistance programs, Aid to Families With Dependent Children and Supplemental Security Income, declined from $26.6 billion to $23.0 billion in constant 1983 dollars. During the same time period, government outlays (less administrative costs) on the food stamp and medicaid programs grew from $25.7 billion to $44.5 billion and medicare reimbursements increased from $25.1 billion to $55.6 billion. In the private sector, employer contributions to pension and health plans and to government social insurance programs grew from $224 billion to $324 billion over the 1974-1983 period.

In 1982, the Census Bureau issued the first two reports on noncash benefits. One report, entitled "Characteristics of Households and Persons Receiving Selected Noncash Benefits," showed the characteristics of households and persons receiving food stamps, school lunches, public or subsidized housing, medicare and medicaid, and employer provided health and pension plan coverage. The other report, Technical Paper 50, was published in response to language in the Commerce Appropriation Bill for Fiscal Year 1981. That language directed the Secretary of Commerce to include in survey reports estimates of the effect of in-kind benefits on the number of families and individuals below the poverty level. Technical Paper 50 was authored by Dr. Timothy Smeeding who was then an American Statistical Association Research Fellow at the Census Bureau. The Census Bureau issues such Technical Papers with the express purpose of soliciting comment and criticism on the statistical methods described therein. By making Technical Papers available to the users of its data, the Census Bureau hopes to produce a better understanding of the accuracy of its published statistics.

Technical Paper 50 presented estimates for 1979 on the number of persons in poverty based on three methods of valuing noncash benefits and several concepts of income. (Attachment B is submitted for the record to describe the valuation techniques and income concepts.) It is important to note that the definition of poverty is established by the Office of Management and Budget. The report was a first effort to explore the issues, data requirements, and techincal feasibility of including the value of certain types of noncash benefits in a definition of income.

Recent Developments

The Census Bureau has recently issued a report showing 1983 data on the characteristics of households and persons receiving noncash benefits and during the past year and a half we issued Technical Papers 51 and 52 showing updated estimates of the number of persons in poverty when income is defined to include the value of certain noncash benefits.

At the Census Bureau's First Annual Research Conference held in March of this year, staff members presented a paper on the valuation of noncash benefits. That paper attempted to clarify the assumptions and statistical techniques used by Smeeding and presented some preliminary data on the distribution of the value of employer provided benefits by type of industry.

Our research work is preliminary. As we do for the decennial census program, the Census Bureau is attempting to develop a forum that will allow the data user community to give us their advice and comments, in this case, on the valuation of noncash benefits. We are planning to hold a conference later this year on the measurement of noncash income. We have tentatively identified four issues to be discussed at that conference. The first issue concerns the statistical definition of income; primarily, which noncash benefits should be included as income. The second issue concerns methods of measuring the value of noncash benefits, especially those methods that have been used by the Census Bureau. A third issue concerns the statistical comparability of comparing income including noncash benefits with a poverty threshold based on money income only. The final issue concerns potential

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impacts on laws of changing the way in which income is defined. (For the record, Attachment C is a copy of the draft outline of the agenda for this conference.) The Census Bureau will prepare and distribute proceedings of the conference and make them available to the subcommittee.

Let me highlight our intentions for this conference so there can be no misunderstanding. The primary purpose of the conference is to bring together a representative group of income data users to explore with the Census Bureau ways to measure the recipiency and value of noncash benefits. We will make every effort to ensure that the attendees represent not only those persons with technical expertise but the entire community of persons with a strong interest in the collection, dissemination, and interpretation of income and poverty statistics -- including members of Congress and representatives of minority communities.

We will assess any conference recommendations and give those recommendations serious consideration when deciding on future activities. We will keep Congress advised of our plans. The conference will not address the issue of the definition of poverty. Let me reiterate, the responsibility for determining statistical standards, including the poverty definition, rests with the Office of Management and Budget.

Mr. Chairman, that concludes my remarks on the valuation of noncash benefits and my testimony. I would like to add that I and the rest of the Census Bureau staff look forward to working with you and the other committee members on all the activities conducted by the Census Bureau. I especially want to say how pleased I am you are visiting our Jersey City and Tampa test sites. We hope you can visit future test censuses sites as well.

Attachment A

1985 Test Census Update
Period Ending April 12, 1985

New processing techniques are being tested in both sites where the census questionnaire will be mailed back to the Jeffersonville Processing Office for immediate data processing activities, and new automated management and control techniques. The following activities are automated for the 1985 test census: address control file, check-in of mail returns, assignment of nonresponse and failed edit cases, and management information reports. In both sites, we implemented an expanded U.S. Post Office check of our address list and a unit-by-unit precanvass to see if we can improve coverage completeness, especially in apartment buildings.

In Tampa we also will determine the effect of the forms designed for the optical mark recognition data capture device on mail response rates and data quality. In Jersey City the major objective is the use of a two-stage enumeration technique. One panel housing units will receive short and long forms, and the other panel would receive only short forms. Upon completion of nonresponse follow-up, the sample forms for the two-stage test panel will be mailed.

I. Development of the Address List

The initial base address list is a purchased vendor file that was updated by an advance casing check and dependent canvassing. Subsequent updates were made during precensus local review and the time-of-delivery and casing check when questionnaires are delivered. All these checks help to improve coverage completeness.

II. Local Review

The Local Review Program is designed to provide housing unit (address) counts before Census Day and upon completion of the enumeration to the local officials for review and comparison against the counts from local records to identify possible deficiencies in the counts.

The precensus local review operation was completed for both sites. Jersey City questioned 12 blocks. As a result, a few missed multiunit buildings were added.

Tampa questioned almost every block, but the differences in the local and census counts usually were less than 5. We conducted a detailed investigation and have found that for several blocks a single block number was assigned to multiple blocks and they were deficient in the coverage of trailer parks. We also found that one Census Bureau enumerator had listed units outside the city limits during the precanvass.

	Adds	Geographic Corrections
Tampa	226	421
Jersey City	284	4

The second part of the Local Review Program will be conducted after all the enumeration and coverage checks have been completed.

III. Preparation and Mailing of Questionnaires

Labeled questionnaire packages were delivered to the post office on schedule in mid-March.

The casing and time-of-delivery checks were completed by mail carriers on March 20 and March 21. As a result of these checks, approximately 760 addresses were added to our mailing list in Jersey City, and 1,100 in Tampa. The questionnaires were delivered to all households on March 21. Census Day was March 24, 1985.

IV. Mail Response

As of April 12, the mail response rates were:

	No. of Mail Returns	Mail Return Rates
Jersey City	32,380	35.1%
Tampa	66,749	52.7%

On April 2, reminder cards were mailed to half of the nonresponding households in Tampa; the mail returns improved by about one percentage point for each of the next 3 days. In addition, the mayors of both cities held a press conference to encourage the public to mail in their forms.

A survey is being conducted of nonrespondents in both sites to determine the reasons why they did not mail back the questionnaires.

V. Questionnaire Assistance

The walk-in and telephone assistance centers began on March 21 and operated until April 5. These assitance centers provided explanations of the questions and assisted the respondents in completing their questionnaires. Over 1,000 persons were helped in Jersey City and about 4,500 persons were serviced in Tampa.

VI. Recruiting for Nonresponse Follow-up

Recruiting for enumerators to work on nonresponse follow-up began in January in both sites. The goal was to identify four qualified persons for each position. As of Friday, April 12, this goal had not been met.

	Actual Assignments	Persons Tested/ Passed	Persons Reporting for Training	Persons Working on Nonresponse Follow-up
Jersey City	1,250	2,656	661	450
Tampa	481	1,777	489	398

Selection of enumerators began April 1, and the initial training sessions were conducted on April 8 and 9. Recruiting and training efforts are continuing in both sites.

Status of Nonresponse Follow-Up

The nonresponse follow-up production rates are higher than expected in Tampa, so the census may be finished within the estimated budget, even though the mail rate was relatively low. The nonresponse follow-up operation in Jersey City will be monitored closely, since the mail return rate was low. We are experiencing some problems in hiring the necessary enumerators to do the job in Jersey City and there is the potential that the census will not be completed within the estimated budget.

VII. Special Place Enumeration

Enumeration of all special places, such as hotels, hospitals, colleges and military bases, began March 23-25 and is scheduled to be completed by April 17. That activity is largely complete in Tampa and 60 percent complete in Jersey City.

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VIII. Processing Office Activities: Check-in and Data Conversion

For the test censuses in both sites, the questionnaires are being mailed back to the Jeffersonville Processing Office for automated check-in and rapid data capture either by data keying or optical mark recognition (OMR) equipment for Tampa short forms. The telephone failed edit operation also is being conducted from the processing office. In 1980 the questionnaires were manually checked-in at the local district office, and telephone failed edit operation took place there. We are currently experiencing no major problems with this processing configuration.

The OMR equipment being used for Tampa 100 percent forms is operating smoothly, although the questionnaires must be treated for humidity so the equipment will function properly. Respondent errors are being detected in these forms; respondents are having difficulty with format and response for the age and sex questions. Respondents are circling the answer in the question column rather than following the instructions to fill the corresponding circle in the answer column. Edit review of the questionnaires is in progress, and failed edit cases are being contacted by telephone for the missing information.

IX. Current Outreach and Promotion Activities

The outreach and promotion program was not a test objective for the 1985 test census, and new techniques are not being tried; 1980 techniques are being repeated. The outreach activities started last fall and became very busy since the beginning of the year. Contacts were established with local organizations, articles in local newspapers, public service announcements (both radio and television), and other community awareness projects.

A. The collection offices in both sites conducted open houses in February to kick off a countdown to Census Day featuring local political, civic, business, and community leaders along with representatives from the Census Bureau. Both broadcast and print media attended the event in both sites.

B. The school project was implemented in public and private schools in both sites the week of March 18. This project included a lesson plan for grades 4-8 and informational brochures on the 1985 census in English and Spanish that were provided to all students to take home.

C. Staff from the Public Information Office has been working at both sites to generate media coverage for Census Day, and the "Not-Too-Late Campaign" directed to persons who had not mailed in their questionnaires. Publicity is now focusing on the availability of jobs and the personal visits being made to the nonresponse addresses. Key census staff are appearing on local talk shows and press releases will continue to be issued.

D. Local community leaders in both sites have participated in the complete count committees to endorse and promote the census. The committees helped to distribute promotional materials provided by the Census Bureau. The Tampa group is very active, having guaranteed 3 hours of television time and arranging for the production of radio and television public service announcements. The Jersey City group started late and is less active.

X. Publication of Results

Data about the basic population and housing characteristics will be issued in a special publication. Specifications are currently being developed.

The following is a list of the major evaluations to be completed: quality of automation, cost and timing of the two-stage census, new techniques for developing and improving the address list, use of automated lists for follow-up, peer training for replacement enumerators, questionnaire evaluation and mail reminder cards, and the effects of computerized matching changes on post-enumeration surveys.

ATTACHMENT B

VALUATION TECHNIQUES AND INCOME CONCEPTS USED IN TECHNICAL PAPERS 50, 51, AND 52

Three Techniques For Valuing Noncash Benefits

Before examining each valuation technique in detail, it is useful to understand the major conceptual differences between them and their general relationship to one another. "Market value" is the estimated private market cost of the goods and services transferred to the recipient. "Recipient or cash equivalent value" is the estimated cash amount for which recipients would be willing to trade their right to the noncash benefit given their current incomes (including cash and the market value of any noncash benefits received). "The poverty budget share value" is the average dollar amount of the good or service consumed by households with money income approximately equal to the poverty level. The value assigned by either of the latter two approaches is the lesser of (a) the value as determined by the approach being used, or (b) the "market value" approach.

MARKET VALUE

The market value (MV) of an in-kind transfer is equal to the private market value of the benefits received by the individual. In the case of food stamps, the market value is directly measurable as the dollar value of food coupons. In other cases, MV is not so easily determined.

The market values of Medicaid and Medicare benefits were estimated by dividing total medical benefits paid by the programs by the number of persons covered. The calculations were carried out after persons were placed in various risk categories. For Medicare, the risk classes were (1) age 65 and over, and (2) blind and disabled. For Medicaid, the risk classes were; (1) age 65 and over, (2) blind and disabled, (3) age 21 to 64, nondisabled, and (4) age less than 21, nondisabled. The market value assigned varied by risk class, state of

residence, and whether the value of benefits going to institutionalized persons was included with the value of benefits going to those not in institutions. For example, the market value of Medicaid benefits in 1983 was estimated to be $7,883 for a person 65 and over living in New York and counting the benefits going to the institutionalized. If the benefits going to the institutionalized were not counted, the estimated market value dropped to $3,222. For nondisabled persons under 21 living in New York, the estimated market value of Medicaid was $602 when benefits going to the institutionalized were included and $546 when they were not included.

In the case of public housing, the conceptual measure of MV was defined as the difference between the private market rental value of the unit and the rent paid by the tenants. Estimating MV for public housing is difficult because the private market rental value of public housing units is not available directly from surveys or other sources. Complex statistical procedures were used to link data from the Annual Housing Survey and the March Current Population Survey in order to arrive at estimates.

RECIPIENT OR CASH EQUIVALENT VALUE

In theory, the recipient or cash equivalent value (RV) is equal to the amount of cash transfer that would leave the recipient at the same level of well-being or utility as the noncash transfers. Because consumer preferences cannot be observed and measured with a high degree of accuracy, a simplified measure of recipient value has been developed.

The RV estimates are based primarily on survey data on consumer expenditures. The procedure used assumes that the cash equivalent value of a noncash benefit is equal to the normal expenditure on that good or service by unsubsidized

consumers with similar characteristics (e.g., income, family size and type, location, and age). Calculating cash equivalent value in this manner implicitly assumes that there is no difference between the comparable family and the recipient family. However, if both units are eligible for a given benefit and only one actually participates in the program while the other (the comparison unit) does not, it may be incorrect to infer that the expenditures for the given good by the nonparticipant are equivalent to those of the participant if there were no program. This may result in selectivity bias, one of the limitations of the cash equivalent value approach.

If the recipient normally spends less than the MV of the noncash benefit on the subsidized good or service, the noncash benefit will cause a change in the expenditure pattern. This means that the noncash benefit is worth less to the individual than an equal amount of cash that would not lead to a change in spending habits. If the MV of the benefit exceeds the normal expenditure level, RV can be approximated by the level of normal expenditures. If normal expenditures exceed the MV of the benefit, RV is equal to MV. That is, because the noncash benefit recipient would normally spend at least as much as the MV on the good, it would not alter the normal expenditure pattern.

The estimates of RV's were based on data from several sources. The normal expenditures for food were computed using diary data from the new Consumer Expenditure Survey. Those for public housing were based on the complex linkage of March Current Population Survey and Annual Housing Survey data for 1979 and 1981. The data used to compute the RV's for medical benefits are especially weak. They were derived from the 1972-1973 Consumer Expenditure Survey and required the inclusion of persons covered by Medicare and employer-provided health insurance.

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POVERTY BUDGET SHARE VALUE

The final valuation approach, the poverty budget share approach, is based on the premise that families have basic needs in several areas, including food, housing, and medical care, and that noncash benefits of one type (e.g. medical care) cannot be used to meet basic needs of another type (e.g. food). The poverty budget share approach differs from the other two approaches in that it is not intended to be a general method of valuing noncash benefits. The approach is based in part on the current poverty definition and attempts to measure the extent to which noncash benefits meet basic food, housing, and medical care needs. The first step in this valuation approach is to measure the poverty budget share values for food, housing, and medical care. The poverty budget share value for food is set equal to one-third of the poverty threshold, and the poverty budget share values for housing and medical care are based on survey data on the expenditure levels of families at the poverty line. The poverty budget share concept calls for values to be based on the expenditure patterns of unsubsidized families at the poverty line, but, in the case of medical care, it is difficult to obtain a measure of expenditures by families who are not subsidized by either a government or employer provided plan. Completion of the first step results in estimates of the cost of meeting basic food, housing, and medical care needs. The second step involves a comparison of the market value of the benefit in question (e.g. food stamps) with the poverty budget share amount for the good or service (i.e. food) as calculated in step one. The rationale for the poverty budget share approach is that a noncash benefit of a given type can meet part or all of the basic need for that type of good or service, but it will not contribute to meeting the basic needs for other types of goods or services. Once the poverty budget share values are determined, a noncash benefit is assigned a value equal to the poverty budget share value if that value is less

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than the market value of the benefit. If the poverty budget share value is greater than the market value of the benefit, the approach assigns a value equal to the market value.

The approach is based on the current poverty definition and is not intended to be used as a general method of valuing noncash benefits. In practice, the approach produces estimates of the number of poor that are very similar to the estimates produced by the cash equivalent approach.

Valuation Techniques and Income Concepts Used in Technical Papers 50, 51, and 52

1. Official estimate: money income only
2. Market value approach: income defined to include food and housing benefits
3. Market value approach: income defined to include food and housing benefits and medical care benefits for noninstitutionalized persons
4. Market value approach: income defined to include food and housing benefits and medical care benefits for institutionalized persons and noninstitutionalized persons
5. Recipient or cash equivalent value approach: income is defined to include food and housing benefits
6. Recipient or cash equivalent value approach: income defined to include food and housing benefits and medical care for noninstitutionalized persons
7. Recipient or cash equivalent value approach: income defined to include food and housing benefits and medical care benefits for institutionalized persons and noninstitutionalized persons
8. Poverty budget share value approach: income defined to include food and housing benefits
9. Poverty budget share value approach: income defined to include food and housing benefits and medical care benefits for noninstitutionalized persons
10. Poverty budget share value approach: income defined to include food and housing benefits and medical care benefits for institutionalized persons and noninstitutionalized persons

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ATTACHMENT C

4/11/85

DRAFT OUTLINE

Offsite Conference on the Measurement
of Noncash Benefits

First Day

Evening session

1. Introductory remarks

II. Overview of Census Bureau s work on noncash benefits

III. Four major issues to be explored at this conference:

A. Statistical Definition of Income

1. What should income measure as a statistical concept?

2. Which noncash benefits should be included as income?

Food stamps and school lunches?
Public housing?
Energy assistance?
Free or subsidized health insurance or medical care?
Free or subsidized education?
Employer contributions for social security, medicare, and unemployment compensation?
Employer contributions for pensions and health plans?
Business lunches and entertainment?
Return on equity in own home?

3. Should the Census Bureau prepare income estimates for both before and after taxes?

B. Methods of Measuring Noncash Benefits

1. The three methods used by the Bureau to value noncash benefits are: (1) market value, (2) cash equivalence, and (3) poverty budget share. Are there conceptual problems with any of these techniques? How serious are the practical problems of implementing each of the three approaches?

2. Are there other approaches that should be explored? Are there other methods of implementing the approaches used thus far that might produce more satisfactory results?

3. The choice of a method to value medical care has a great effect on poverty estimates. Why is the gap so large between the valuation obtained from the market value approach and that obtained from the other two approaches?

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C. Statistical Comparability Using Alternative Methodologies

1. If the Federal Government adopts a revised income definition, what changes should be made in the Census Bureau's basic series on income distributions? Is it likely that we would end up with several alternative definitions of income? (We now have 9 experimental estimates of the extent of poverty in addition to the official one.)

2. The current measure of poverty is based on money income only and on the cost of a food plan and a multiplier that takes into account nonfood requirements. The multiplier was estimated by using the relationship between food expenditures and cash income. What are the statistical implications, if any, of comparing income including noncash benefits against poverty thresholds based on money income only?

3. Given that private and government programs change over time, and given the possibility that valuation techniques may change over time, are there potentially serious problems in maintaining data comparability over time?

4. Given that surveys vary in design and content, are there potentially serious problems in maintaining data comparability among surveys (e.g., CPS, SIPP, decennial census) if the definition of income is modified to include certain types of noncash benefits? Because of space limitations, it may be especially difficult to collect data on an expanded list of income sources in the decennial census.

D. Use of Poverty Statistics in Federal Laws

The definition of income used by the Census Bureau has absolutely no effect on eligibility for government programs that distribute benefits to individuals. However, if an alternative income definition was used, how would it affect Federal laws that require the use of poverty data in allocating funds to states and local areas?

Second Day

Morning session — Presentation of papers on the first three major topics (A, B, C). For each of the topics there will be one invited paper and two discussants.

Afternoon session — Assignment of individuals to three concurrent sessions

Meeting of the three concurrent sessions

Evening session — Report on each of the three sessions and open discussion

Third Day

Morning session — Presentation of fourth paper (D) and open discussion

Concluding remarks

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Mr. GARCIA. I thank you very much, Dr. Keane, for your straightforward testimony. There are a number of questions that I have. As Chair, I am going to abide by the 5-minute rule myself so that my colleagues will be able to ask questions. Then we will come back to me and we will keep going until we exhaust the questions we would like to ask.

Just let me start off on the noncash benefits portion of your testimony. Has the Bureau's testimony for this particular hearing today been reviewed by the Office of Management and Budget, and what imput, if any, has OMB had in the testimony put forth by the Bureau of the Census today?

Mr. KEANE. As is the routine procedure, the Office of Management and Budget did review the testimony. I am not aware specifically of any modifications. I ask either of my colleagues to comment if you have any comments to make.

Mr. BOUNPANE. I am not aware of any.

Mr. GARCIA. Let me say this to you. We were scheduled to received your testimony on Friday of last week to give us ample time to review it. We received it Tuesday; today is Thursday. As you and I both know, there are a number of questions that we draw from the testimony submitted by witnesses. I would just hope that in the future that we would have the testimony submitted to the committee at the scheduled time to give us the appropriate amount of time we need to be able to draw some questions from it.

Mr. KEANE. We shall try.

Mr. GARCIA. Yes, because we just received it—today is Thursday; we received it on Tuesday, and I think we are going to need more time than that.

Let me get into some technical questions. Before the 1980 census, I took a trip to Iowa City, IA, where they were manufacturing these computers or scanners, as they are called. It was my sense then that the Bureau needed time to prepare for the census. As I understand, unless the Bureau starts the acquisition and system development cycle no later than spring of 1986, the Census Bureau will find itself using the current FACT 80 systems, many of which have not yet been upgraded to meet the needs of the 1990 census.

How much time is the Bureau allotting for identifying and contracting the needed equipment as well as developing and testing the software as procedures and training for the staff that is going to have to compile the data.

Mr. KEANE. That issue has been thoroughly thought through and planned and it is also continually evaluated. I can say to you that we have milestones which are marks for us to meet on a schedule that began in August 1983 and goes through December of 1992. The automation equipment decisions are built inot that schedule.

What we have to reason with and evaluate as a trade-off is how long we can wait to test thoroughly the hardware and software and systems options before us and get the kind of evidence that we need to change or add or otherwise innovate when it comes to new equipment. We have built that into our planning schedule.

Yes, the time is tight, but we thought of that and there are plenty of oversight individuals who are helping us make sure that we keep that in mind. So, at this point, we are comfortable with

our schedule and we are very sensitive to the point that your Iowa experience prompted you to raise.

Mr. BOUNPANE. Congressman, if I could just add one thing, the system that you viewed in Iowa is just like the system we are using in Tampa. You might want to keep that in mind when you visit down there.

Mr. GARCIA. Yes. OK.

You mention on page 9 of your testimony that the keying method to capture census data is a very flexible data-capturing technique. First of all, I would like to know what you mean by "flexible," and is not keying a dated technique in light of all the technology that we have had since the 1960 census?

I mean, there have been so many advances since 1960 and yet we are still with the keying method.

Mr. BOUNPANE. Congressman, I would be glad to address that. What we mean by "flexible" is two things: First of all, several of the questions on the census questionnaire, you will remember, require a write-in response as opposed to the respondent filling a circle. That is because we can't list every category that could possibly be listed, and those, then, have to be converted to a numeric code before the computer can actually read them.

In the case of direct data entry through keying, that step is not necessary. The data keyer could key the words and the computer could actually then code it, as opposed to having that manual step first.

The second aspect of flexibility that would come from data keying is that it allows you more freedom in designing the form to make it user-friendly, if I could coin that word, to the respondent actually filling it out; whereas the other technology requires some strict constraints on the construction of that form.

That is what we meant by "flexibility." The answer to "is it dated?" is that it is correct that there are newer technologies, but we feel that those aspects of flexibility are so important that we should still consider keying even though it is an older technology.

Mr. GARCIA. My 5 minutes are up and I am now going to ask my colleague for questions. I have many more questions to ask, but I really want to try to abide by the 5-minute rule.

My colleague from Utah, Mr. Hansen.

Mr. HANSEN. Thank you, Mr. Chairman. Thank you, Dr. Keane, I appreciate your excellent testimony.

I would like to ask you some questions if I could. I understand that the definition of poverty is established by OMB and that this committee would have nothing to do with that, I assume.

Let me ask you this: You mentioned in your testimony that you would like to improve the count of minorities. What is the definition of "minority" under the law?

Mr. KEANE. I think I should defer to a colleague because I want to be absolutely correct on that.

Mr. BOUNPANE. I can't really address the definition of minorities, but I can tell you what our statement meant concerning counts in the census.

We make efforts after the census is over to try to evaluate how well we have done on counting the population. In making those measurements, we are able to break them down by subgroups, as

well as the total population. In particular, we have been able to measure the coverage in the census for the black population, as opposed to coverage in the census for the nonblack population.

We have also been able to make some inferences about the coverage of the Hispanic population in the census relative to the coverage of the non-Hispanic population.

The statement that was made by the Director was a general term meaning that, in particular, we have had higher undercount rates for the black population than for the nonblack, and we have had higher undercount rates for the Hispanic population than for the non-Hispanic. It was a combination of those into the general statement of minority that was inferred there, as opposed to saying who was a minority and who was not.

Mr. HANSEN. What do you attribute that to, the poorer count that you had with blacks and Hispanics?

Mr. BOUNPANE. No one really knows the answer to that. There are several hypotheses put forward; generally the reason we miss people in the census is primarily people choosing not to put themselves into the census, as opposed to mistakes in the census process. Not to say that there aren't some mistakes in the census process, but not a whole lot. The hypothesis is that for some reason these populations are more fearful about putting themselves into the census than others, and therefore, we miss more of them.

Mr. HANSEN. Under the definition that I don't have, let me just ask this if I may. Would Amish-Mennonites—would they be considered minorities?

Mr. BOUNPANE. I don't know how to answer that. I could not say whether Amish are more likely to be in the census, as opposed to non-Amish. I don't know the answer to that.

Mr. HANSEN. Without having the knowledge of knowing exactly why the count was low in minorities—whatever the definition is—what do you intend doing to do what Dr. Keane mentioned, and be in a position to adequately make that count in the next one?

Mr. KEANE. Certainly our outreach efforts are, I would say, at least in a comparable way, compared to the past, massive. They have started earlier. There is more investment of time and of dollars. There is more sensitivity, I think, to the issue. There are a number of committees inside—at least 10, and perhaps that is an undercount—addressing the issue.

We have an ongoing research program of high priority, a special unit. It has the attention of the leadership of the Census Bureau, as well as the specialist in these areas on an ongoing priority basis. We know the magnitude of interest in this issue. We have some notion of what is riding on it and, therefore, we are responding commensurately.

Mr. HANSEN. Let me ask you this: I guess the one thing that has struck me in the magnitude of it and almost shocking is the enormity of the task that you folks have coming up in a short time. Also, it is somewhat shocking to me to see how much leadtime you will need in order to be ready to do this adequately.

As I am given to understand, in 1977, the census questionnaire was sent up for congressional approval. Could I just ask: What is going to be your timing for approval of the Congress on the 1990 questionnaire? Is there any target date for that?

Mr. KEANE. We are controlled by laws—it is my understanding that content questions are submitted in 1987 and the questionnaire form in 1988. Of course, our dress rehearsal is scheduled for 1988, too, when things have to be about finalized, is that not right?

Mr. BOUNPANE. That is correct.

Mr. GARCIA. The gentleman from Utah's time has expired.

My colleague from Indiana.

Mr. MYERS. Thank you, Mr. Chairman.

First, I am pleased to see Bill Butz here. Bill was formerly a constituent of mine and his parents still are. For those of you who don't know, his father is the famous former Secretary of Agriculture, Earl Butz, whom I hear from about weekly, and I probably will hear from him this weekend. I expect to be in Lafayette, Bill.

Also, in this area, I suppose he is better known as a cousin of the center of the hog line on the Redskins. Dave Butz is his cousin. So, pleased to see you, Bill.

Dr. Keane, through the years I have been in Congress, when I first came here, ADP was not usually a large line item and budget request of any agency, but it is becoming increasingly larger each year. I have also learned through the years that you buy a computer this year and it is outdated almost by the time it is installed. Is that why you haven't made a decision yet, that you are waiting for the newest model to come out?

Mr. KEANE. That is the primary reason. Also coupled, though, with our test censuses, where we are able beforehand to identify the most promising technologies, and I am including software as well as hardware and the support system, so that we can allow ourselves to respond to that rapid technological advances that you refer to.

Mr. MYERS. Then, in the test that you are making now, the pretest of the 1990 census is being actually conducted—the computers are being used and the procedures are being used that you expect to use. Is that correct?

Mr. KEANE. Yes. For instance, automation is a significant part of the Tampa test currently going on and automation is recurrent as a test variable in the test—in the 10 census tests that either have already been conducted—4 were in 1984, 2 are ongoing now, 4 sites are planned for 1986. So by time, by priority and by real-world conditions, we are giving the test commensurate attention to the size of the decision that is in the offing.

Mr. MYERS. We all have been reading about the IRS experience with installing a computer and then not properly having it functional—at least accurately enough and fast enough to take care of the needs this year. That is not going to happen to the Census Bureau is it; that you are going to install it too late and not have it adequately tested?

Mr. KEANE. No, it is not. We read that experience, too, and we follow what others are doing whose scale of operation approaches ours to learn from them. We are not a smug organization that feels it has all the answers in itself.

Our outreach extends to the business community and to other government agencies, anywhere that we can get legitimate help in making the decisions before us, why, we gladly welcome their advise.

Mr. MYERS. The date established for the taking of the census is established statutorily by Congress, as I recall. Is that the right date that we should have?

Mr. KEANE. I personally see no compelling reason to change it. Let me quickly add that I certainly am willing to listen to those who have suggestions and the reasons for those suggestions that would deal with an alternate date.

Mr. MYERS. It presents problems to me in living in rural Indiana for several reasons. First, a lot of our people are still in Florida on that date. They may only spend 3 or 4 months in Florida. A major portion of the time is spent in Indiana, but that particular date, they haven't quite come back north yet. They are counted in Florida for all the benefits, but they come back up and use all the facilities in Indiana. Also, the college students. I am not really clear how they are counted. I know they are counted on campus and I have six universities, as Bill knows, more than 50,000 students. They are counted there, but they aren't counted for any other purpose except to just physically say, "OK, you are in the count," but we get no benefit from them even though we provide 9 or 10 months a year facilities to take care of those students.

It seems to me like there ought to be some adjustment here. We are getting the worst of both worlds by the date we are selecting here and the way they are counted. Do you have any response to how we might correct that?

Mr. KEANE. No, but I think the Assistant Director for Demographic Censuses does.

Mr. BOUNPANE. I get to answer the good questions.

Mr. MYERS. You don't want the ball, do you?

Mr. BOUNPANE. No, I want it.

With respect to the first question you asked, we count people at their usual residence, so in the instance that someone is away from their usual residence on April 1, the intent is to count them back home and that is asked of the respondent. So if a family from Indiana was in Florida at the time of the census for a 3-month vacation or whatever, they are to be counted in Indiana. We would collect the information in Florida and allocate that to Indiana.

Mr. MYERS. The problem is this, and we were told this happened. There is a house in Florida where they live. Now, when they delivered the document there, they didn't respond, but yet, you, the Census Bureau, give a value to that house as having 2.1 or some arbitrary figure like that—you give a number to that house for so many people living there. Is that not right?

I am about to use my time up, I realize.

Mr. BOUNPANE. I think we may be mixing two things, and I will try to answer both. First, it is very important that we do ask people about usual residence and allocate them back. In general, that tends to work quite well.

I think the second point you were asking about is somewhat different, and that is, if, after weeks and weeks of attempting to enumerate the entire population, we get down to a small set of cases in which we are not able to make a determination of what is going on in the household—after five or six visits, we still have not made a contact—in that particular instance, we do what you said, which is that the computer allocates people into that house, which could be

zero or could be 2.2, depending on the appropriate distribution for allocation. That comes only to a very small percentage of the cases at the end of the process when enumeration just can't be finished, last time, about 0.3 percent of the households.

Mr. MYERS. Mr. Chairman, you lost congressional seats; Indiana lost congressional seats. Part of the reason was our constituents weren't there on the April date. They were there most of the year but Florida, as an example, gained seats because those people live 3 or 4 months down there.

Mr. GARCIA. Yes.

Mr. MYERS. I think it is a real problem that needs to be addressed in the future. I thank you for your response and I have used my 5 minutes.

Thank you, Mr. Chairman.

Mr. GARCIA. Thank you, Mr. Myers.

In the Tampa pretest, the Bureau chose to use the keying method to capture all data other than response to the shortform questionnaire instead of using the FOSDIC and the automated camera technology used in the 1980 decennial census. First of all, isn't this a step backward in the use of available technology? If you plan to use the keying method for the 1990 census, how much keying equipment do you anticipate needing and how many clerks do you plan to hire to operate the equipment?

Mr. KEANE. As I said in the testimony, Mr. Chairman, the decision has not been made. I identified three primary options open to us, of which one is the keying method. As I also stated, that is the purpose, among others, for our test censuses.

Mr. BOUNPANE. Just to add to that, Congressman, you are correct. We are looking at the optical mark reading technology in Tampa. We plan to look at an updated version of what we did in 1980 in one of the 1986 test censuses so that we can compare the two and come to a decision.

Your other question was how many key stations would it require if we actually keyed and I don't know the answer to that precisely. I would be glad to submit that for the record.

Mr. GARCIA. I would appreciate that.

[The information follows:]

The number of key stations needed is tied to the number of weeks to be allowed for the data capture process (currently we are working toward making that as short as possible), the number of key strokes per hour temporary employees can produce (we are looking at what our research can tell us is reasonable), how much verification and rekeying our quality standards will require, and how many shifts a day we are willing to support. All of these factors can affect radically the number of estimated key stations, so that we cannot at this time give a meaningful estimate. We do believe, however, that the number of key stations required for the FOSDIC System and for OMR are 72% and 80% of the number needed to key the entire form.

Mr. GARCIA. This is just a personal thought on my part. I would like to see the Bureau separate the short form of the 1980 census into the categories stated on page 13 under the first standard of questionnaire content, that is, data needed for constitutional and legislative reasons, those needs specifically to administer Federal, State, and local programs, and those needed to describe the American population and housing stock.

What would your feelings be about that?

Mr. BOUNPANE. We can also submit that to you, Congressman.
Mr. GARCIA. OK.
[The information follows:]

In preparation for the Bureau of the Census review of data needs and questions to be included on the 1990 census, the attached preliminary listing [1] of Federal legislative uses of census data was prepared last year by census staff. The work of the Interagency Working Groups carried out over the past six months has surfaced a number of other legislative requirements, which will be included in the final document which will be submitted to the Congress in April 1987.

Mr. GARCIA. My colleague from Utah asked a very important question, the question of what is minority, and I think that out of the many questions in the 1980 decennial census, I personally was amazed that the Bureau chose to question the validity of the responses on the Spanish origin question. On page 14 of your testimony, you mentioned that it is difficult to ask race and Spanish origin questions and obtain valid answers.

How does the Bureau know how valid other answers are?

Mr. BOUNPANE. There is no way to know that precisely, Congressman, but let me tell you what we did do before the last census and why we said that we think the questions we actually used were good.

Prior to the last census, we had several advisory committees who made suggestions to us about ways to ask the questions on race and Spanish origin and these committees, obviously, represented the appropriate communities involved. We then drew up several versions of how to ask the questions and we asked those in some test census environments prior to the last census. Based on the results of that and discussions with those advisory committees, we came to conclusions about the eventual question.

The other way to get information on that particular topic is to reinterview a sample of people since these are, in fact, self-response questions—how will a person self-identify themselves—and then you select your sample and go back and personally interview them and see if your finding there agrees.

A third thing is that there are *a priori* expectations about the number of people by categories and you see how many people are identified by the questions compared to *a priori* expectations. Putting those together is the way you say whether or not the questions are good or not in terms of identifying these categories.

Mr. GARCIA. Has the Voting Rights Act been part of the reasons for what the Bureau is doing in the terms of the question of race based upon the mandate of the Congress to apportion legislative and congressional districts based on the Voting Rights Act? Has that been a problem for you? Has that come up in any conversation at all?

Mr. BOUNPANE. The only discussion we have had about that is with States in terms of producing information for the States for their use within the State redistricting process. The States have requested of us information by more than total population. They have asked for information by white and black and Asian and Pacific Islanders, Indian and Hispanic, and we have supplied that information to the States by small geographic areas so that they

[1] Retained in official file.

could use that information in constructing districts within the States.

Mr. GARCIA. The areas that would come under the Justice Department's ruling as to what they have to abide by, is that what we are talking about? In other words, a State like, let's say, Utah, doesn't have to abide by the Voting Rights Act in that they don't have to respond to the Justice Department; while there are sections of California and sections of the State of New York that must submit whatever they do, based upon the census figures, to the Justice Department for approval.

Mr. KEANE. Would you like us to respond in writing——

Mr. GARCIA. Well, the question was asked by Mr. Hansen and I think it is a very legitimate question. There are some sections of the country that are mandated by the Justice Department to come up with figures and statistics so that reapportionment is done fairly and that it is covered under the Voting Rights Act.

There are other States that are not part of that, and I guess what I am trying to understand here is, if there is any union between the Justice Department and the Bureau of the Census to verify and make sure that data is supplied to them. I guess not; OK, let's forget about that.

You mentioned the Jersey City test and the low rate of response that you have had. If I remember correctly, prior to the 1980 census, there were a couple of trial ones. I know that one was held in the city of New York, the Lower East Side. There was one that was held in Texas. There were several others, and the return rate was also poor.

I remember it well because I was part of that. I chaired the subcommittee during the Lower East Side pretest. What I am saying to you is that we are going through the same problem again, are we not? I mean, isn't there a better method? Do we publicize in these areas prior to this census? Are civic groups and all the other organizations aware of the importance of what this pretest data means for their particular locality?

Mr. KEANE. In answer to your second one, yes. There is a systematic and rather complete planned program of communication. Your memory is pretty good in answer to the first one about New York. The results are comparable to the Lower Manhattan test in 1978. Let me file, perhaps, the overriding considerations. One, we pick some areas that we strongly suspect will give us difficulties because that is important in getting a range in our sample of what the real world is going to be like for 1990; and the second observation, and even more important, is that the Census Bureau really learns when we have difficulties. When things go smoothly, we get an endorsement of what we are doing.

Mr. GARCIA. Yes.

Mr. KEANE. When we have problems to address is when we make our breakthroughs.

Mr. GARCIA. It just seems to me that you have not taken advantage of public service announcements. This is available time, mandated by the FCC, that the Bureau of the Census is not taking advantage of. I haven't seen one PSA as it relates to the Jersey City pretest, and I am a New Yorker. Jersey City especially has a large Hispanic community; there hasn't been one PSA on the Spanish

radio or on Spanish television. There are a number of black periodicals. There is a large black population there. Nothing. In terms of just the regular media, PSAs, nothing.

It seems to me that when the average person gets, this form in the mail, they will say, "What the heck is this?" The people have no idea what it is. "It is another one of the dumb government's forms that I have to fill out. The heck with the government," You and I know we are facing a very serious problem. I mean, every poll indicates that our 1990 census is going to be a hell of a lot more difficult to conduct than any prior census because of the general public's attitude toward government—This is no longer just a minority issue. This is an issue across all segments of the population; White, black, middle class, wealthy and everybody. I just don't see us taking advantage of the available resources.

We have time to rectify it now and I am not being critical. What I am saying is that we should use all the resources we have. It is free. It doesn't cost the government anything. The airways have a responsibility on these PSA's to give us a hand in the public interest. I just don't see it being done.

Mr. KEANE. You might be interested, and it is rather recent, that we have been approved again by the Advertising Council to handle the 1990 census. The departure—and it is a favorable one for this topic and those of you interested in improving the 1990 census, is that the cooperation date that we start is much earlier. We will start as soon as we can feasibly work with others.

Mr. GARCIA. Before I yield to my colleague from Utah who has some additional questions, I want to mention, my experience with my late beloved friend Mark Ferber during the 1980 census. We worked very closely? We held 26 hearings; all over this country visiting everyplace the Bureau of the Census suggested that we go, to alert the communities. I probably have had more field hearings out of this committee than with any other committee in the history of Congress. To my knowledge, and I say that to you as an advocate not as an adversary, I just don't get a sense that enough is being done.

As my constituents every now and then give me the business and tell me I am not doing enough, I have got to give you the business and tell you that we are not doing enough together. I say that to you not to be critical but to let you all know that we have got to try and do the best we can to get as many people to participate.

My colleague from Utah.

Mr. HANSEN. Thank you, Mr. Chairman.

You know, I am fully aware that one of your mandates is to gather information, and having read an interesting book called "Megatrends," I guess we are in the era now of information gathering. That is the big thing; that we have left industrial and agriculture and that type of thing, but just as a question, as I read it, the Constitution—and I stand to be corrected—only mandates that the census be taken every 10 years, for the purpose of reapportionment. Yet, we know there is a great deal of apathy from respondents in 1980 as a result of the number of questions and some of them that they felt were on a personal nature.

What laws really exist that require the Bureau to gather all this additional type of information? Is it just the idea that bureaucrats

and bureaucracies are demanding that we have additional information to predicate CPI's and indexes and all those things we go through in statistical classes? I would be curious to know the answer to that.

Mr. KEANE. If I may insert a point of history, it dates back to 1810. The first census in 1790 was five questions. In 1810, because of a pending war with Great Britain, the War of 1812, the census of manufacturers started, and with that, seemed to launch and act as a foundation for increasing interest by data users in statistics.

The ones that we serve and the questions that we ask which answers lend themselves to that community are those that have been pretty well justified to the Census Bureau and there are explicit criteria that are contained in the written statement that help us to determine. For instance, beyond the legal mandate, as you point out is paramount, beyond that, though, are the statistics available from some other source? For instance, in this deregulated environment, we have lost some of the sources for those statistics and that is why the Census Bureau is in the position to be asked to make up for that deficiency.

The scope of the request—that is, how many people, how many organizations would the data benefit? Another critierion is, is there an alternative through so-called administrative records or perhaps another data-gathering establishment within the Federal statistical system. So that is a little bit of the history and suggestion of three or four of the criteria used in determining, and of course, it, as with other aspects of the process and the questionnaire, are under continual review through our standing advisory committees and through other fora that we use.

Mr. HANSEN. I know you can be extremely accurate on random sampling and various statistical methods to ascertain certain things, as pollsters do. They constantly amaze me how accurate they can be.

Just out of curiosity, what do you do if a census taker is walking into an area and knocks on the door and the person speaks German? The man doesn't understand it. What do you do at that point?

Mr. KEANE. I am going to let my bilingual colleague answer that.

Mr. BOUNPANE. There are several things that could be done. First of all, we produced study guides in 26 languages last time that were available to enumerators so that if a person who spoke German needed it, there was a package that they could get that was in German that explained to them how to complete the census form.

Second, we have the ability to obtain bilingual enumerators when a need was identified.

Mr. HANSEN. So you probably anticipate an area where you will have a foreign tongue in it. You will send people in that are bilingual.

Mr. BOUNPANE. In areas where we anticipated that, we asked that the enumerator be bilingual, yes, particularly with regard to Spanish.

Mr. HANSEN. What do you do if someone refuses?

Mr. BOUNPANE. We try to talk them into participating. If the first person who visits is not capable of doing that, then we try to

send the next person up the line and we make one more attempt further up, and basically that is successful.

Mr. HANSEN. I guess what I am driving at is, is there any language in the statute that would have any punishment for anyone?

Mr. BOUNPANE. Yes, the census is mandatory and there are punishments indicated for people who do not respond.

Mr. HANSEN. What would it be, a misdemeanor?

Mr. BOUNPANE. Pardon?

Mr. HANSEN. Misdemeanor or what?

Mr. BOUNPANE. I am not sure exactly what the penalties are. We could find out for you.

Mr. BUTZ. Possibly a visit by my cousin. [Laughter.]

Mr. BOUNPANE. That is more than a dismeanor, right? [Laughter.]

Mr. BOUNPANE. Congressman, we choose not to use those penalties as a hammer to say if you don't respond, you will be penalized this way. Rather, we try to get people to cooperate because it is to their benefit and a civic duty within the country to do that. That tends to work.

Mr. HANSEN. Out of curiosity, have you ever found any group that has any reason at all—to refuse answering the census questionnaire? I got an interesting letter the other day that prompts that question.

Mr. BOUNPANE. I don't know for what reasons. We have had groups who have refused as a group to participate. We had some instances of certain Indian tribes last time who did not want us to enumerate them and we also had some difficulties with certain universities and we were able to overcome those through persuasion.

Mr. HANSEN. Thank you.

Thank you, Mr. Chairman.

Mr. GARCIA. My colleague from Indiana.

Mr. MYERS. Thank you, Mr. Chairman.

Pursuing further the count of empty houses, could you briefly—for the record only, and I say briefly because we haven't got room to put 25 pages—tell me how you give value to a vacant property, or at least a house that does not respond or an apartment that does not respond? What value do you give to that?

Mr. BOUNPANE. Yes, we can submit that for the record.

Mr. MYERS. Mr. Chairman, if you could put that in the record, I think it is necessary.

Mr. GARCIA. Without objection.

[The information follows:]

We understand this question to mean what do we do about those households that do not respond to the questionnaire, either by mail or to an enumerator actually visiting the household.

There are two categories involved: those houses that are truly vacant at the time of the census, and those that are occupied but do not respond to the mailed questionnaire. When we check our address control file and learn that we have not received a response from an address, an enumerator goes to that address and makes a determination about whether or not the housing unit is occupied by certain criteria that we provide: for example, the appearance of the unit (are there curtains or plants in the windows, toys in the yard, etc.) or information obtained from neighbors. If the determination is that the unit is truly vacant, it is tabulated as vacant, and the housing unit characteristics are obtained by observation or comparison with neighboring units. If it is determined that the unit is occupied, the enumerator obtains information from the residents by direct interview. If the enumerator cannot

obtain an interview after several visits, the enumerator lists the unit as occupied and includes whatever information is available from observation, neighbors, or the apartment manager about the number of persons living in the unit and characteristics. Computer programs impute the missing information.

In a rare number of cases (about .3 percent in 1980), the enumerator is not even able to determine if the unit is occupied or vacant, because contact with an appropriate respondent is never made. (These are called "unclassified units.") We have two options for what to do with such cases: either not include them in the count or, based on accepted statistical techniques, substitute or impute for the missing data. The Bureau believes that using substitution and imputation improves the quality and usefulness of the final tabulations, particularly because to choose to exclude these cases would have the effect of imputing zero occupants where our evidence indicates the truth is other than zero in most cases. The techniques used to impute are accepted in the statistical community and thoroughly reviewed by our technical advisory committees.

Mr. MYERS. I, too, am troubled—as a great many people are that respond to these questionnaires—about the necessity for some of the questions that are asked. I realize that there must be some value to all those questions or you wouldn't go to the problem of asking those questions, but as politicians, the ax falls on our head. They are the ones who come around and say, "You are too damn nosey already and here you are asking this personal question that only my family and family clergy should know."

I know you explained how you try to formulate these questions, but—and there must be some compelling reason—do we need really to ask all these questions? The original intention, and the original authority for a census was to just count heads. Now we have gone much beyond that and I realize the screening is very difficult. Do we really get the value of what it costs us to collect, not only in dollar cost, but also in the anxiety it presents, particularly to elderly people or people who do not understand the reason, including this Member of Congress, for some of the questions?

Mr. KEANE. As I indicated in the testimony, it is the tradeoff between the interest and need of the users versus the length of the questionnaire. NASA is not the only one in the space business. We realize it, too, but we have got just so much space and we try to make the most of it. We use our standing advisory committees. We have a series of off-site conferences and I kind of wish you had been to a few of those because when you try to cut one out, you should hear the constituency. A victory often is to hold it to what it is, let alone try and cut.

Mr. MYERS. I know. I serve on Appropriations and I listen every afternoon to 25 or 30 witnesses who say, "Yes, I want to support cutting the budget, but don't cut my program." I hear that every day, too. I wish you could hear some of those, too.

Mr. KEANE. But because it is an important point, we have made the criteria that we decide explicit, as I alluded to in my last answer.

Mr. MYERS. It just seems like there are a lot of these questions that aren't necessary in my judgment. I know you send them up for us to have some review anyway, and it seems that they could be reduced.

Now, what is going to be the cost of this 1990 census? Do you have any estimates at this time?

Mr. KEANE. In total, approximately $1.8 billion, without getting into any assumptions about future pay raises and the like—

Mr. MYERS. Not quite a dollar a head, then, is it, for each person counted?

Mr. KEANE. One of the goals for the 1990 is to keep the cost-per-enumerated unit consistent with 1980.

Mr. MYERS. That would be, what, $5 per count?

Mr. BOUNPANE. Yes, that is correct, Congressman.

Mr. MYERS. That is more expensive than buying votes. Better let us do it. We can do it cheaper.

Well, in closing, the chairman mentioned public service announcements and here, again, I think that might alleviate some of the problems for you and certainly for us if we would soften up the population by public service announcements ahead of time; stating the necessity for asking these—I will put in quotations—"ridiculous" questions that they think are ridiculous and I somewhat agree with some of them. If you could have public service announcements to announce not only the necessity and the purpose for the questionnaire and of the census taking, but the necessity for some of these questions and how they benefit the person being counted.

I think that would help all the way around if you could have some public service announcements to prepare the population.

Mr. GARCIA. Would my colleague yield?

Mr. MYERS. Certainly. I yield back my time.

Mr. GARCIA. Just on that point, I must say that in the two cities you are now pretesting—I speak now as a person of Hispanic background—you have a large Hispanic community in Tampa, FL, and the largest Hispanic community in Jersey City. That is a freebie.

I mean, you can get the PSA's in there and alert people beforehand. That is just for one small segment of the overall population, but it doesn't cost anything. However, it would alert them and prepare those who really are going to be frightened silly when they get these forms.

You take the average poor person in my district; they receive that long form; they say, "What the heck is this?" At least they have some idea that something is coming in. They still are going to be as confused as hell, but at least it is not going to throw them—you know, give them a nervous breakdown.

I just think that my colleague is absolutely right. I think it is for nothing. All of these people under the FCC guidelines would be delighted to cooperate with you.

Mr. MYERS. I am also thinking about 1990 and preparation several months before, starting in 1989, in preparing the population by public service announcements and whatever media you can use. Maybe we can help even if you give us information to put in our newsletters: what is coming and the necessity for responding.

The farmers who get frequent questionnaires from somebody—I guess the Department of Agriculture conducts some of these censuses—and they think it is absolutely ridiculous—some of these questions that are asked—because they haven't been told the necessity and how they fit in; why it helps them to respond to these questionnaires. I think you could help yourselves and certainly help us, at least those of us who will be around in 1990. I don't know who it is going to be. [Laughter.]

Mr. BOUNPANE. Congressman, we think you are absolutely right and we are going to put additional effort into that. As Dr. Keane mentioned, we are beginning earlier this year in our work with the advertising council and more specifically, they are going to be working with us in the census tests next year, in 1986, to begin formulating programs, including public service announcements.

Mr. MYERS. You mean we have got tests coming every year now?

Mr. BOUNPANE. Well, not every year, but the next several years, we do, yes. We take a breather at the end to make sure we can get everything right.

Mr. MYERS. Rest up for the big one.

Mr. BOUNPANE. That is right.

Mr. KEANE. I particularly like your notion, Congressman Myers, about giving you something to feed to your constituents because the census should be everybody's job, not just the Census Bureau, not just the oversight; it is what a civilized nation does and it has a royal return so all of us should have a role; all of us should have a commitment and I welcome yours.

Mr. GARCIA. I have a series of questions that we would like to ask, but I think you have been patient. GAO is right behind you and they have been patient. What I would like to do is, as we have done in the past, submit the questions to you. If you would, be kind enough to respond so that we would have an opportunity to insert them in the hearing record.

Again, many thanks for being with us today.

Mr. KEANE. On behalf of the three of us, we thank you.

[The information follows:]

Processing Equipment

Question 1: As I understand, unless the Census Bureau starts the acquisition and system development cycle no later than Spring 1986, the Census Bureau will back itself into a position of deploying the current FACT 80 systems, many of which have not yet been upgraded to meet the needs of the 1990 census. How much time is the Census Bureau allotting for identifying the needed equipment, to contract for and install the hardware, to develop and test software, and to develop procedures and training for staff?

Answer: The Census Bureau has defined an overall plan to reach decisions on automation for the 1990 Decennial Census. This plan is the outgrowth of the recognized need to establish an orderly and logical process for determining the optimal configuration of offices, equipment, and resources for the 1990 Decennial Census. More specifically, the objective of this plan is to answer the primary question: How can the Census Bureau design a system architecture (hardware, software, telecommunications, and project management tools) to conduct the census in the most effective and efficient manner possible? This design requires a schedule of milestones that must be closely monitored through September 1986 when the decision about the configuration and distribution of equipment for the 1990 census will be made. Then, the procurement process for the required equipment will begin in early 1987 to meet installation, including testing, schedules. Development of procedures and training methodology can occur concurrently with procurement and installation. Two graphs of the major census milestones required to meet the September 1986 decision date for data capture and processing systems architecture and related procurement schedules are attached.

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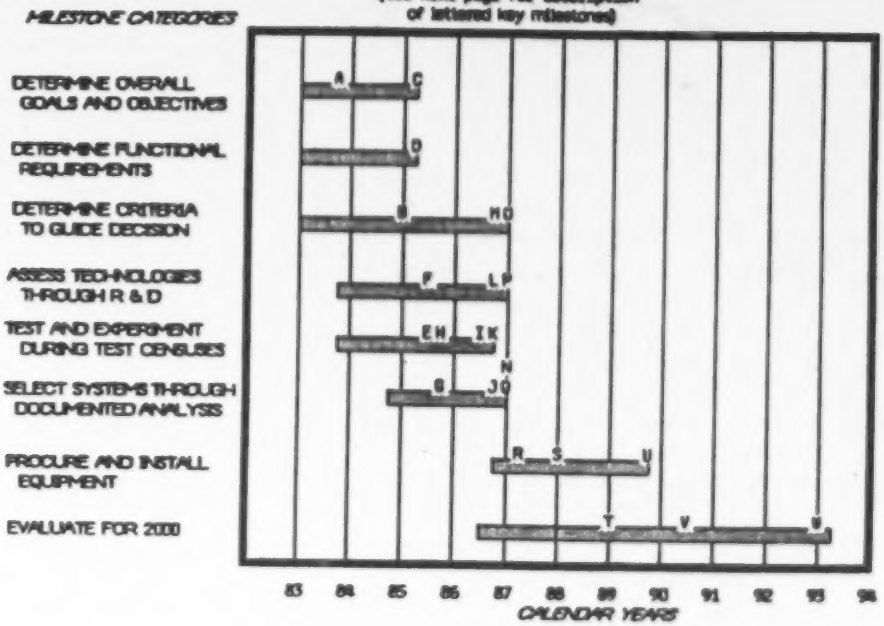
INITIATIVE TITLE

1990 CENSUS AUTOMATION

OVERVIEW OF KEY MILESTONES

(see next page for description of lettered key milestones)



AUTOMATION PLANNING OVERVIEW

Extract of Key Milestones

A. 8/83.....Bureau Statement of Overall 1990 Census

B. 12/84.....Preliminary Development of Criteria to Guide Decisions

C. 2/85.....DOC Review and Clearance of Goals and Objectives

D. 2/85.....DOC Review and Clearance of Statement of Functions to be Performed

E. 4/85.....1985 Test Census

F. 5/85.....Contractor Review of Available Technologies

G. 9/85.....DOC Review of Preliminary Analysis of Alternative System Architectures

H. 9/85.....Evaluate 1985 Test Census Results

I. 4/86.....1986 Test Census

J. 7/86.....Cost/Benefit Study of Options

K. 8/86.....Evaluate 1986 Test Results

L. 8/86.....Complete Bureau Review of Available Technologies

M. 9/86.....Final Bureau Statement of Criteria to Guide Decisions

N. 9/86.....Bureau Selection of System Architectures

O. 12/86.....DOC Review and Clearance of Criteria to Guide Decisions

P. 12/86.....DOC Review of Available Technologies

Q. 12/86.....DOC Review and Approval of Recommended System Architectures

R. 3/87.....Issue RFP's

S. 11/87.....Award Contracts

T. 1/89.....Implement Automation Research and Experimental Systems

U. 9/89.....Finish Installation of Equipment

V. 4/90.....Conduct 1990 Census

W. 12/92.....Complete 1990 Automation Evaluations

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Question 2: If the Bureau decides to stay with the FACT 80 system, which was used for the 1980 Decennial Census, what is the Bureau's timetable in upgrading the system to meet the needs for processing the 1990 census?

Answer: The Bureau already has a commitment to the FACT 80 System for the Current Population Survey. For this reason and for possible use in the 1990 census, the 1980 FOSDIC is in the process of an upgrade and the prototype upgrade is being tested. The first portion of of the equipment necessary for the automated camera upgrade has been ordered, with the prototype expected to be completed by the fourth quarter of calendar year 1985.

Question 3: For the 1980 Decennial Census, the Bureau used approximately 60 cameras for the FOSDIC system. As I understand, the Bureau currently has 30 cameras and may need as many as 120 cameras for the 1990 census. What is the Bureau's schedule in acquiring these additional cameras? I understand that it may well be too late to meet the 120 requirement even if the decision were made today.

Answer: The Bureau is currently reviewing the status of the 30 cameras in storage in Jeffersonville and, where necessary, will upgrade those cameras as a result of any improvements determined necessary by the tests of the previously discussed prototype camera. Should the FACT 90 system be selected for data capture in the 1990 census, a schedule will be developed for the additional cameras required by the collection office/processing office configuration chosen. Decisions in both these areas will take into account the time necessary to acquire the additional equipment. We believe that the number of cameras needed will be closer to 60 than 120 and our present schedule calls for beginning construction of additional cameras in the fall of 1986.

Question 4: You mention on page 9 of your testimony that the keying method to capture census data is a very flexible data capture technique. What do you mean by "flexible?" Is not keying a dated technique in light of all the technical advances made since the 1960 census?

Answer: Considering the technical advances made since the 1960 census, keying is a more traditional data capture technique; however, it provides flexibility in three areas of the data capture system. First, it allows for widely dispersed or decentralized district offices since keying stations have fewer constraints than other methods under consideration. Second, direct data entry through keying will eliminate the manual operation of converting write-in responses on the questionnaire to a numeric code since the computer can code the keyed word. The third aspect of flexibility is increased freedom in designing the questionnaire since capturing the data is not dependent on the form being computer-readable, and the form, therefore, can be made "user-friendly."

Question 5: In the Tampa pretest, the Bureau chose to use the keying method to capture all data other than responses to the short form questionnaire instead of using the FOSDIC and the automated camera technology used in the 1980 Decennial Census. Isn't this a step backwards in the use of available technology? If you plan to use the keying methods for the 1990 census, how many keying equipment do you anticipate needing? How many clerks do you plan to hire to operate the equipment?

Answer: We used the keying method in Jersey City and the OMR method in Tampa. We do not believe that keying is a "step backward" since it still is a widely-used method of data entry by banks, (for example, the IRS, large merchandising operations and other organizations). Canada keyed its last census after previously using FOSDIC and considered it an unqualified success. Furthermore, no matter what data capture technology is chosen to support the

the conversion of questionnaire information for the 1990 decennial census, keying will still be required to support many census operations which cannot use any other method of data entry. Keying offers flexibility in the area of forms design (for processing and developing a userfriendly form) and the ability to use any existing paper stock to print the 130 million questionnaires required. OMR or FOSDIC technologies require special paper specifications and sensitive printing tolerances.

The number of key stations needed is tied to the number of weeks to be allowed for the data capture process (currently we are working toward making that as short as possible), the number of key strokes per hour temporary employees can produce (we are looking at what our research can tell us is reasonable), how much verification and rekeying our quality standards will require, and how many shifts a day we are willing to support. All of these factors can affect radically the number of estimated key stations, so that we cannot at this time give a meaningful estimate. The number of clerks needed would depend, of course, upon the number of key stations determined to be the optimum number, as well as the number of shifts needed to process the data within the time constraints.

Questionnaire Content and Design

Question 1: Out of the many questions in the 1980 Decennial Census I am amazed that the Bureau chose to question the validity of responses on the Spanish origin question. You've mentioned on page 14 of your testimony that it is difficult to ask race and Spanish origin questions and obtain valid answers. How does the Bureau know how valid other answers are?

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Answer: The statement in the testimony to which you refer does not mean to indicate that the Spanish origin question responses were the only ones which we evaluated. Beginning with the 1950 census, the Bureau has had a program in each decennial census to validate responses to most of the questions asked. These have taken the form of reinterviews, record checks and response variance studies. Reports have been published on the results from the 1950, 1960, and 1970 validations. A report on the work for the 1980 census is in process.

Question 2: I would like to see the Bureau break the short form of the 1980 census into the categories stated on page 13 under the first standard of questionnaire content (i.e., data needed for constitutional or legislative reasons; those needed specifically to administer Federal, state, and local programs; and those needed to describe the American population and housing stock).

This question was asked orally at the hearing by Chairman Garcia and the Census Bureau submitted a document showing the Federal uses of the data collected by the questions on the short form.

Question 3: As I understand, the purpose of the Jersey City test census is to test the two-stage approach. You have mentioned on page 20 of your testimony that the two-stage approach may be one way to allow a quicker count of people and their essential characteristics, such as age, race and sex. And, that if the mail response rate is increased by the shorter form, answers to these basic questions may be more accurate as well. Our staff director has been advised that the rate of return on the test census is currently 34-percent on the short form questionnaire. You have also mentioned in your testimony that the Jersey City test census is experiencing a low mail return rate. Perhaps the return rate is related to the number of questions. If the Census Bureau is interested in quicker counts of people and their essential characteristics, why has the Census Bureau chosen to reduce only the size of the questionnaire form rather than to reduce the number of questions?

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Answer: In the 1985 tests, as well as in 1980, we only asked 7 questions of each person, and only 10 about the housing unit, on a complete-count basis. It only took the average household 10 to 15 minutes to complete this information and we believe the very high mail return rate (about 83%) in 1980 is evidence that this short form is very acceptable to respondents. The questions on the short form are those needed to provide data necessary at the small geographic level, while those asked on the longer form are needed at larger geographic levels: counties, states, and so forth.

In order to determine what questions should be asked in the 1990 census, we have been reviewing the legislative and programmatic requirements through a series of Local Public Meetings across the country, Interagency Working Groups, and the Federal Agency Council. We always receive requests for far more questions than the ones that finally make it to the questionnaire.

The reference to reducing the size of the questionnaire, we believe, is to the form used for our test of Optical Mark Reading technology in Tampa and not to any form used in the Jersey City test. The form was prepared in the size acceptable by the machine which we were testing.

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Question 4: Regarding questionnaire content, you have mentioned on page 11 of your testimony that data is collected by census because various users "substantiated" their need for information. Has the Census Bureau validated the users' needs?

Answer: Our wide-ranging consultative process, together with the application of the six criteria outlined in my testimony, will constitute a legitimate assessment of the data needs for the 1990 census. The opportunity afforded Congress by our submission of proposed questions contributes to that needs assessment.

Question 5: On page 12 of your testimony, you have mentioned that one of your criteria for planning the 1990 census is to strike the proper balance between the users' needs for information and the length of the questionnaire. What about the cost factor in processing data?

Answer: We do consider the quality, cost, and difficulty of processing the data. One should realize that reducing or increasing the number of questions for which data are collected by a few items items will have only a marginal effect on the total administrative costs and difficulties of conducting the census. Most of the cost and difficulties are incurred in finding all the people to count and enumerating the basic set of questions.

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Undercount

Question 1: A lot of money was spent on the 1980 Decennial Census to minimize the undercount. Has the Census Bureau reduced the undercount differential between the white population and the minority population in the 1980 census as compared to the 1970 census? Is the disparity between the White and the minority populations the same even with the efforts taken in the 1980 census? What new techniques will be used in the 1990 census to reduce the disproportionate undercount of the minority groups?

Answer: Our estimates of coverage in the 1980 census are not sufficiently accurate to provide us with exact information, but it appears that undercount differential has been reduced but not eliminated.

In 1990 we will expand our outreach efforts by supplementing the successful 1980 activities with new efforts that appear feasible. In this regard, we have already initiated contacts with minority groups, such as our January 1984 meeting with representatives of the Black, Hispanic, Asian and Pacific Islander, and Native American communities. We are also now determining which of our other 1980 coverage-improvement operations are cost-effective and should be repeated and looking at potential new measures, such as the use of administrative records.

Question 2: On page 21 of your testimony, you have mentioned that studies have consistently shown some groups are undercounted at a disproportionate rate to the rest of the population. Why not make adjustments for these groups?

Answer: This is a very complicated issue for a number of reasons. The ability to adjust equitably depends upon determining the extent of the undercount and determining it in time to make any adjustment a useful one. Any estimate of the number of persons missed will contain error and an adjustment based upon such an estimate may

prove to be less equitable than the original counts, particularly if an adjustment is made at all levels of geography. It may never be possible to measure coverage accurately enough to allow equitable adjustment. Furthermore, in the past, we have not been able to make estimates about coverage until long after the census numbers were issued and in use by everyone.

There are other complicating factors. There are questions about legal obstacles to adjustment as well as procedural difficulties. The perception of an announced policy of adjusting the numbers might adversely affect the public acceptance of the census.

General

Question 1: On page 6 of your testimony you mentioned the Census Bureau's management for the 1990 census. I would like to have the management plan submitted as part of the hearing record.

Answer: The organizational structure, which will be used to plan for the 1990 census, is under the direction of an Assistant Director for Demographic Census and is comprised mainly of two divisions, the Decennial Planning Division--responsible for developing the overall census plans and budgets--and the Decennial Operations Division--responsible for developing the automated collection and processing systems. Both divisions are staffed and operating, and a number of cross-division groups have been established to manage the overall operations. The primary management group is the Census Managers, composed of a high-level experienced person from each division involved with census activities (such as Field, Geography, Population, Housing, Statistical Methods, and so forth, as well as

support divisions such a Procurement, Public Information, Budget, and so forth). This group meets twice weekly, on an average, and is responsible for overall coordination and issue resolution. The Division Chiefs of these same "census-involved divisions" also meet regularly, as well as those persons designated as 1986 test coordinators, and a number of other task forces on specific subjects.

On the basis of program plans developed over the past year and a half, a Management Information System for the 1990 census has been entered into the computer and is being refined for use as the overall managment tool. It is based on a prototype developed for the 1985 tests, which is presently in use daily, along with an automated cost and progress reporting system, with menu-driven software accessible by the various census divisions and managers. As the Census Bureau learns what kinds of reports prove most useful and what formats are the most efficient, these ideas will be incorporated into the 1990 system.

The plan is currently undergoing review by Census Bureau divisions and being revised into its final form. When revised, it can be submitted for the record.

Question 2: On page 18 of your testimony you mentioned establishing committees to represent four minority population groups. When will these committees be in place?

Answer: We requested the establishment of four minority advisory committees, the formation of which the Commerce Department has approved. We hope to have the first formal meetings of the four minority

advisory committees later this year. They will be able to contribute to our planning for 1990 on such important items as the 1986 National Content Test and our outreach plans for 1990. In the meantime, we have been holding special purpose meetings with minority leaders over the last year and a half to explore issues of concern to them and our testing plans for the near future.

Question 3: On page 21 you mentioned establishing a specific set of criteria that will determine whether it is statistically reasonable to adjust the census counts. Who will establish the criteria? Are there any drafts which can be submitted to the Subcommittee?

Answer: We are currently developing a set of criteria to be used to determine whether or not our estimates of coverage in the census are good enough to be used and whether the effects of the adjustment based upon them would be equitable. We do not presently have any drafts of criteria to submit to the Congress, but we are planning to share all of the information we develop with Congress.

Question 4: For the record, what value does the Bureau place on nonrespondents of census surveys?

Answer: This question was asked by Congressman Myers at the hearing and an answer was submitted for insertion in the hearing record at that point.

Additional Census Bureau Questions

Question 1: The Constitution's only mandate is that a census be taken every ten years for the purposes of reapportionment. As you know, there was a great deal of apathy from respondents in the 1980 census as the result of the number of questions and their personal nature. What laws now exist that require the Bureau to gather this type of information?

Answer: We do not agree that there was a "great deal of apathy" in the 1980 census and suggest that a mail response rate of about 83% would tend to contradict that view.

For the 1980 census, we prepared a document listing each question and the legal or progammatic citation for each one. A copy of that document is attached.*/ As we determine the questions to be asked in the 1990 census, we will prepare a similar document and submit it to the Congress.

Question 2: The GAO believes that you are not proceeding in a timely manner with the selection of the computer system. Are you behind schedule and in the end will the 1990 census be more costly?

Answer: In the answer to a previous question, we detailed the schedule we have developed to determine the optimal configuration of offices, equipment, and resources for the 1990 census. We have met or are ahead of that schedule. A primary goal of our planning process is to keep the cost of the 1990 census no higher than the per unit cost of the 1980 census and that goal has been a primary consideration in development of the plan to design system architecture.

* Retained in official hearing file.

Question 3: Do you feel that the cost of the 1990 census will be less than the 1980 census due to the use of computers, or would you say that the cost will not be decreased by use of computers?

Answer: Our goal for the 1990 census is to maintain the cost per housing unit at the same level as in the 1980 census. We anticipate that the increased use of automation will contribute toward the achievement of that goal.

Question 4: A computer is only as good as its operator. What specific training do you have in mind when the computer is available to all 12 offices? Have you already begun this training, and, if not, why not?

Answer: We are not sure what this question means, particularly the reference to the computer being available to all 12 offices, which we assume means our Regional Offices. We are aware, however, of the need to train employees to use automated equipment, and our current employees are receiving training to perform their daily responsibilities. In connection with the 1990 census, we are well aware of the potential difficulties we could face in training a large number of temporary employees to use automated equipment, and for that reason are seeking to develop a system that is relatively simple and does not require a high level of computer expertise to use.

Question 5: We will hear testimony from GAO today stating that they do not believe that your automation approach has been perfected. This is the same testimony they submitted last year. Can you give us assurance that this assumption is not correct?

Answer: We have not yet finally chosen our automation system architecture, and our planning schedule does not call for that choice to be made until the fall of 1986. We are not sure what "perfected" may mean in the context of this question, but we believe that a prudent choice of automation equipment and its entire system design needs to be based upon evidence derived from actual tests, which we are conducting in 1985 and 1986 for this purpose.

Question 6: Has the Bureau given any consideration to limiting the questionnaire to more basic questions in order to obtain a more accurate population count?

Answer: We have no evidence to demonstrate that limiting the number of questions beyond the few basic questions now asked of everyone would ensure a more accurate population count. Even though mail return rate and accuracy are not the same thing, it's interesting to point out that in the 1980 census, the mail return rate for the sample form was only slightly lower than the mail return rate for the short form. In the review which the Bureau conducts, however, in preparation for choosing the subjects about which questions should be asked in the census, extensive consideration is given to the possibility of eliminating any unnecessary questions.

Question 7: In the 1980 census, nearly all the states and larger cities spent hundreds of thousands of dollars to promote the census, which was in addition to the money spent by the Census Bureau. What has been accomplished by the Census Bureau to eliminate this added expense to make people aware of the importance of the census?

Answer: We have just recently got agreement from the Advertising Council that they would like to direct our advertising effort for the 1990 census, and we believe that by involving the Advertising Council early, they can assist with our test censuses, and we will eventually develop an even more effective promotion campaign than we had in 1980. We are expanding all of our outreach efforts as well as adding a number of new approaches. Additionally, we will be working with local areas to develop ways for them to assist us in promoting the census through local organizations and existing mechanisms.

Question 8: The GAO observations are that the 1990 address list may not be as complete as the 1980 address list, and that you have not worked closely with the Postal Service. Since the Census Bureau was so anxious to obtain the address list from the Postal Service, why has there not been more emphasis placed on the use and application of their address list?

Answer: We do not agree with the GAO observations that the 1990 address list may not be as complete as the 1980 address list, and take strong exception to the statement that we have not worked closely with the Postal Service. We have tested the Postal Service ability to compile address lists, as well as a number of other methods for creating and updating the lists. At this point, it does not appear that the Postal Service lists would be more cost efficient or more complete than lists we prepare by other methods. We will

continue to evaluate and test methods of improving our address lists for 1990 and expect them to be as good, if not better, than the 1980 lists.

We are currently working with the USPS on a regular basis and will be establishing an interagency task force in the next few months to examine a whole range of ways in which the USPS can help us take the 1990 census. Their present cooperation in conducting the Address List Compilation Test and the 1985 test censuses has been outstanding.

Question 9: In 1977, the census questionnaire was sent up for congressional approval. What is going to be your timing for approval for the 1990 questionnaire?

Answer: The Census Bureau is required by Title 13, Section 141, to identify the subjects to be collected by the census to Congress by April 1987 and to provide the specific content items to Congress by April 1988.

Question 10: Are there going to be any changes in the type of questions asked on the employment questionnaire for enumerators?

Answer: We presently have no plans to change these questions.

Question 1: In your testimony you mention how the Bureau is evaluating noncash benefits received by the non-poor as well as the poor. But why has the Bureau's efforts been more concentrated on noncash benefits received by the poor?

The Bureau has concentrated research efforts on estimating the value of noncash benefits received mainly by the low-income population because the 1981 Senate directive charged the Bureau to place emphasis on these benefits.

Question 2: According to your testimony, it seems that the Bureau includes only health and pension plan coverage as employer-provided noncash benefits. Why not others such as tax credits, tax deduction, stock options, fringe benefits, etc.?

The survey questionnaire used to obtain noncash benefit data presently includes only employer-provided health and pension plans. These are by far the two most common noncash benefits received from employers. Information on other "fringe" benefits such as stock options, use of automobiles, meals, etc., could also be collected; however, their value is small compared to health and pension plans. Benefits that reduce net tax liabilities are reflected in income measures after taxes. We do have a program that produces and publishes estimates of income after taxes using computer simulation techniques. Within the next year we will have new data from the Survey of Income and Program Participation that will permit us to examine these tax-related issues in more detail.

Question 3: How does the Bureau determine which noncash benefits to include or exclude? What are the criteria? Who determines the criteria?

Selection of the types of noncash benefits to be valued and included as income for purposes of measuring a household's current economic situation raises both conceptual and empirical problems. Conceptually, benefits could range from food stamps to national defense. Empirically, it is technically more feasible to collect survey data on food stamps and assign them a monetary value than to collect data and assign a value to the wide variety of employer-provided fringe benefits. The valuation research we have conducted so far has been limited to benefits received from major government assistance programs mainly because of the 1981 Senate directive that stressed low-income programs. We concentrated on those programs that affect the current economic situation in a direct way, are received by large segments of the population, and can be measured in the surveys now available. A complete discussion of this issue is planned for the upcoming research conference.

Question 4: By adding the market value of medical care as income, the poverty rate for the elderly would significantly be reduced. How does the Bureau justify methodologies of evaluating noncash benefits which lead to a conclusion that the "sicker you are the richer you are"? Does the Bureau have consideration to change the methodologies in valuing noncash benefits to measure poverty more justly?

Medicaid coverage is not based on the actual amount of medical care received (that would lead to the conclusion that "the sicker you are, the richer you are"), but is based on expenditures per person within risk classes (essentially an insurance approach). It is true that

persons who are aged or disabled will have a greater than average dollar income assigned to them because they are in risk classes with higher than average medical costs. The difference among risk classes is especially great when the market value method includes expenditures for the institutionalized because this method calculates costs per person by dividing total expenditures on the institutionalized and noninstitutionalized by the number of covered noninstitutionalized persons.

The use of the market value approach tends to provide a consistency between estimates of government outlays on social programs and estimates of the benefits received by program participants. Analysts interested in the consistency between aggregate economic accounts and economic data from household surveys regard this as a desirable attribute of the market value approach. The Census Bureau presents this approach as one of several possible experimental methods. We understand the reservations that have been expressed by some users, but we are still in a period of experimentation and are not yet ready to discard or adopt any particular approach.

Question 5: In the agenda of the conference on noncash benefits, it is noted that there are 9 experimental estimates of the extent of poverty in addition to the official rate. How were the estimates derived?

The estimates differ according to the method of valuation used and the

types of noncash benefits included as income. An outline of the estimates is presented below:

1. Official estimate: money income only
2. Market value approach: income defined to include food and housing benefits
3. Market value approach: income defined to include food and housing benefits and medical care benefits for noninstitutionalized persons
4. Market value approach: income defined to include food and housing benefits and medical care benefits for institutionalized persons and noninstitutionalized persons
5. Recipient or cash equivalent value approach: income is defined to include food and housing benefits
6. Recipient or cash equivalent value approach: income defined to include food and housing benefits and medical care for noninstitutionalized persons
7. Recipient or cash equivalent value approach: income defined to include food and housing benefits and medical care benefits for institutionalized persons and noninstitutionalized persons
8. Poverty budget share value approach: income defined to include food and housing benefits
9. Poverty budget share value approach: income defined to include food and housing benefits and medical care benefits for noninstitutionalized persons
10. Poverty budget share value approach: income defined to include food and housing benefits and medical care benefits for institutionalized persons and noninstitutionalized persons

Question 6: What is the Bureau planning beyond the conference on noncash benefits to increase understanding of the methods of evaluating noncash benefits and the procedures to implement those methods?

The Census Bureau will spend a period of time studying the proceedings and recommendations of the conference on noncash benefits. The next step after that is not yet determined, but it may involve, for example, the preparation of a technical paper that would attempt to offer a clear exposition of the issues involved in valuing noncash benefits. Such a paper would describe our own work as well as the analysis and comments prepared by other data users within and outside of government.

Mr. GARCIA. Mr. Anderson, we welcome you again. If you would be kind enough to introduce your colleagues.

STATEMENT OF WILLIAM J. ANDERSON, DIRECTOR, GENERAL GOVERNMENT DIVISION, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY JACK KAUFMAN, SUPERVISOR OF AUDITS AND ELEANOR CHELIMSKY, DIRECTOR OF GENERAL ACCOUNTING OFFICE'S PROGRAM EVALUATION AND METHODOLOGY DIVISION

Mr. ANDERSON. Thank you, Mr. Chairman. It is a pleasure to be here again before you.

To my right is Jack Kaufman, who is on my staff. Jack is in charge of our work at the Bureau of the Census. He is truly expert in a lot of these matters. To my left is a peer: it is an unusual thing for two division directors to be at the table at the same time for a hearing. Eleanor Chelimsky is Director of our Program Evaluation and Methodology Division. She is charged with addressing the issue of the poverty level question.

Jack and myself are here to speak to the issues concerning the 1990 census.

With your permission, Mr. Chairman, I would like to have our full statement entered into the record and then Eleanor and I will each briefly summarize the points that are made in our parts of the statement.

Mr. GARCIA. Mr. Anderson, I was hoping you would say that. [Laughter.]

Mr. ANDERSON. I kind of thought you would, sir.

In any event, the 1980 census cost $1.1 billion, but one point I would like to make is that it did continue a trend that the Census Bureau can feel proud of. In fact, it has succeeded in improving the coverage with each succeeding census. Back in 1960, for example, the overall undercount was about 2.7 percent, which was about 5 million people. In 1970, they had reduced it to 2.5 percent, about 5.3 million people, a slight increase; but by 1980—and I was as-

tounded at that final result when I first learned the number—0.4 percent overcount, which is, by my reckoning, less than a million people.

Now, I recognize that that reflects a lot of overs and unders, in particular, on the black and on the other categories, but it is a fact that in 1960, the black undercount was estimated at 8 percent; in 1970, they had it down to 7.7 percent; and in 1980, they estimate they had it down to 4.5 percent, which is certainly moving in the right direction.

On the other hand, the Census Bureau has done some tests using the current populations survey data base, trying to look behind even in more refined fashion what the experience was on the 1980 census with respect to some of these groups. I cited a figure of a black undercount of 4.5 percent. On that more refined basis, this other technique indicated that the true undercount could have varied from an overcount of 0.7 percent to an undercount of 7.2 percent. With respect to nonblack Hispanics, the range is even worse, from a 0.2 percent overcount to an undercount of 7.6 percent. Now, I think it is important to recognize, and the Director brought it out in his testimony, that the Census Bureau has people dedicated to try and deal with this problem of coping with the undercounts. In particular, they are exploring something that, on the face of it makes a lot of sense, can you apportion; can you distribute in some logical fashion, the scientifically estimated amount of undercount for these groups in order to compensate for it? They are working with the National Academy of Sciences' Committee on National Statistics to get some advice about whether, in fact, that can be done in some valid fashion for apportioning the undercount.

I know you are aware that there were over 50 lawsuits in the 1980 census from various parties and jurisdictions asserting that the in counts were inaccurate.

The Bureau has set some worthy goals for itself for the 1990 census. I am going to read them; I think they are important. It wants to conduct the 1990 census without increasing the perhousing unit cost in 1980 dollars; they want to expedite the availability of the data to the users. They ran about 1 year late on making the final data distributions for the 1980 census, as I know you are aware. They want to maintain a high rate of overall coverage and improve the accuracy of small area data while reducing the undercount differential for population groups and geographical areas. They want to strike an appropriate balance between the time it takes respondents to complete the questionnaire and the need for information by census data users.

They have accelerated their testing activities so that they are now 1 year ahead of the 1980 census in terms of what is being done to test the anticipated processes compared with 1980. Now, there are two ongoing tests that Jack Kaufman and his staff have visited and have information on.

One of them involves a test of the questionnaire and this is an idea that GAO proposed back in 1976, and I am sure others felt the Bureau could try it as well, a two-stage questionnaire basis. For the 1980 census, 81 percent of the population got the short form and 19 percent of the population got the long form. The proposal was made, in order to get that data quickly, to use the short form for

100 percent of the population, then go in with a second, longer form, on a sample basis. This recognizes that some people will have been tasked with filling out a form twice, but at least it will accomplish the basic constitutional purpose of executing the census hopefully, more effectively, and certainly more timely.

Well, in Jersey City, they split the city in half. In half they are proceeding with the two-stage process. Everybody gets the short form and a subset get the longer form. In the other half of the city, they are doing as they did in 1980. We think that it is important that these questionnaire decisions be made timely because the point was made that the questionnaire decisions relate to the automation decisions, the type of automation, the capacity, the distribution, and all sorts of other things.

They say that the questionnaire decision is slated to be made next year. Our view is that that crowds things, in terms of having all of your ducks in place for the 1990 census. You heard the Director assert that everything is proceeding more or less on a master schedule that takes them through to 1992. I will come back to that a little later, sir.

The automation is being tested in Tampa. That point was also made, and I won't get into it in any great detail. They are using a piece of equipment that Westinghouse developed, an optical mark reader, to read some mark-sensed forms that were filled out by people using a Census Bureau-provided No. 2 pencil. That will also be one of the pieces of automation that will be tested in Los Angeles next year.

Our view is that they still may end up falling back on the FACT 80 system, which you are aware of, involves microfilming and then using the FOSDIC device to read the film and get it into the computer.

I want to read something that I thought was very, very relevant to this in closing here. This was a letter that the Under Secretary for Economic Affairs at Commerce sent to us back in October of 1982. This was in response to a report that we had prepared at your request, Mr. Chairman.

Look at the undercount problems back in 1982 and what lessons did you learn from that? He said:

> The time constraints under which the Bureau must conduct and process a decennial census do not permit expensive time-consuming repair or maintenance activities, complex training or dependency on a system which might be vulnerable to security infringements. Further, the automated system must allow quick and efficient recovery in the event electrical mechanical difficulties are encountered. The Bureau cannot afford the problems which would result from shifting from an automated to a manual procedure in midstream in the enumeration and/or data-capture period.

I thought we were leading in that direction a little earlier. We in GAO don't have the assurance that the way things are in process right now are going to assure that there is sufficient time to debug the system totally. The point was well made on the IRS' problems with the UNIVAC equipment that it put in the service centers. That is another activity, because it is within my GAO jurisdiction that I have some knowledge of. I could see the census automation activity building into the same type of thing if the Bureau doesn't allow sufficient lead time for appropriate equipment testing.

The director spoke of this master schedule that has been prepared. Something I am not sure about is whether the Bureau has prepared a NASA-sponsored program evaluation and review technique. Using that techniques you have a lot of things going on independently but they all converge to a common-end goal and are properly synchronized with targets. I really haven't seen them laid out like that. It might be some type of reporting you would want to call on them for that would lay out how these various streams are really going to come together and really provide total assurance that the lead times are there. They are so professional in so many respects that I hesitate to say they aren't going to do it.

Let me stop there, if I may, Mr. Chairman, and Ms. Chelimsky will summarize her part of the testimony.

Ms. CHELIMSKY. Thank you, Mr. Chairman, gentlemen. I am very glad to be here, along with Mr. Anderson. We, of course, have a very different sort of project to report on.

I just want to remind you one more time what it is that we are doing. We are developing an evaluative method for assuring the technical adequacy and the fairness of the methods that are used for valuing in-kind benefits. We are not developing formulas ourselves; we are evaluating the methods that exist. I wanted to make that clear.

We are just beginning our work and we have looked at the three methods that everybody knows well: the market value method; the recipient value method and the poverty budget shares method. Before going into what we have been finding, I would like to introduce our Study Director, Dr. David Cordray, just to let you know that he is here with us today.

Even at the very beginning of our technical work, we have identified features of the proposed methods that could lead to distortions in the general understanding of poverty in the United States. For example, the poverty rate for the elderly is greatly affected in valuing noncash benefits by the inclusion of medical care transfers. Adding the market value of medical care to income in 1979 reduces the number of elderly in poverty by 2.6 million in that year. However, about 28 percent of all Medicare payments are accounted for by services rendered to persons who die within a 12-month period.

Now, since the valuation method for Medicare assigns an average benefit level to all program participants—and that word "average" is important—the extensive and expensive services provided to those who are in the terminal period of their lives are credited to the well-being of many others who may have received no actual services during that 12 months.

This not only exaggerates or could exaggerate the real benefits that are received, but can also cause a change in the poverty status of some participants without a corresponding increase in the services they receive.

This concern and others are detailed in the technical appendix of our testimony and, of course, we would be happy to answer any questions you have on that.

In developing and demonstrating methods for valuing noncash benefits, the Bureau of the Census has been very candid about their strengths and their limitations. We are very impressed by their professional skills; but these methods, which are currently

being used by policy analysts have not been comprehensively examined by a group independent of the Bureau. We think this is a problem.

Our preliminary work reveals a number of areas where the procedures that would be used for each valuation technique that has been proposed could be subject to technical errors and these may have a considerable distorting influence on the derivation of poverty indicators and rates.

I would just like to quickly summarize the kinds of findings that we have so that it is clear that these are nontrivial. We are finding disparities between the methods' concepts and their measurement. I think you will see in the technical appendix the discussion we have of the recipient-value method. That method, for example, is supposed to be a utility function which looks at what people would pay for these services, but in fact, there is no very good way to measure it and what we have instead is "normal" expenditures at different levels of income.

Well, that presents a validity problem because we don't know to what degree those measures represent that concept. We call that a nonequivalent comparison group in the trade and that is a serious problem.

The second set of problems we are finding is disparities between the computational procedures used and the actual benefits. If you look at page 9 of the technical appendix, you will notice we set up a hypothetical table of 50 families. What we are talking about here are computational procedures: the use of things like averages versus the median. If you take the average of all the medical services used by the people in that table, you see it comes to $3,000 a family. If you add that on to each family's income, you find that you have catapulted 32 families into the middle class from under the poverty line; whereas, if you use the median, you have another alternative. I am not making the case for the median—I think there may be many other ways to do this—it is just to point out that there are some distortions involved in using the average. But if you do use the median, you come up with a $500 differential, which only moves five families out of poverty, and that is a much closer relationship to the poverty rate as we know it. So the point here is not that one is better than the other, but that they are different and that there may be some distortions involved.

Some other problems that we found are generally technical ones that are involved in obtaining data for executing the methods. These represent another set of problems. Here, of course, what we find is problems of sample size, problems of response bias and problems of nonresponse. There are things that can be done to resolve those problems and the issue is to what degree the methods distort technical accuracy and fairness in the apportionment of these values.

Now, a large number of individuals and families could be affected by the use of these calculations. For policy analyses that address issues involving the evaluation of noncash benefits, the new methods are at present the best ones available: they are the state of the art. But because of the problems I mentioned earlier, we feel that it would be prudent to suspend major changes in policy and deci-

sions regarding eligibility and the distribution of funds until these methods have been comprehensively and independently examined.

That concludes what I wanted to say. We welcome any questions you may have.

Mr. GARCIA. I must tell you that I think, in the 2 or 3 minutes that you used, you have taught us a great deal very quickly and you have the documentation here. I especially like case No. 13 on your chart where you have the actual medical benefit as $100,000.

Ms. CHELIMSKY. Right. That really explains the problem because the central tendency is——

Mr. GARCIA. Yes. Let me just say this to you, that in my own particular case when my mother passed away, she was hospitalized for a good period of time at Mount Sinai Hospital in New York, and there is no question that the medical bills were astronomical. From there, obviously, she was not part of any statistic because she passed away.

Ms. CHELIMSKY. Exactly.

Mr. GARCIA. And yet, her statistic would then remain for those who are living and that is just from my own personal case. Are you going to be a participant in that Bureau of the Census——

Ms. CHELIMSKY. Not as far as I know, but I fully expect that we will be down there.

Mr. GARCIA. I would hope that you would be a participant. There are still some people from the Bureau of the Census in leadership positions at this hearing today and I would hope that they would make a point of that. I couldn't have said it better, and I mean that.

Ms. CHELIMSKY. Thank you.

Mr. GARCIA. My colleague from Utah?

Mr. HANSEN. Thank you, Mr. Chairman. I appreciate your comments. Everything I was going to ask about, you have covered. So, Mr. Chairman, I appreciate their excellent comments and thank them for being here with us today.

Mr. ANDERSON. Thank you, sir.

Mr. GARCIA. We have just two quick questions and I want to thank you, Mr. Anderson, because you have testified before committees quite often. You have a manner in which you zip through and get right to the meat of the subject and let's go on to the next.

Mr. ANDERSON. Thank you, sir.

Mr. GARCIA. Out of all the studies the GAO has done to evaluate the 1990 decennial census. In short, would you say that the Census Bureau is on target with its plans to carry out the 1990 census in a cost-effective manner?

Mr. ANDERSON. I am apprehensive, sir, based upon what I see today.

Mr. GARCIA. You are apprehensive?

Mr. ANDERSON. Yes, sir.

Mr. GARCIA. Would you like to elaborate?

Mr. ANDERSON. Yes, sir. I am concerned on the equipment issue especially, and on the questionnaire. To me, we are being tardy in making some important decisions. I am not sure that late 1986 is an appropriate date. We do not believe the Bureau can wait that

long to make the questionnaire decision. And I am not sure that the equipment decision can be safely put off another year or two.

I can understand that it is always great to have a little more time to study your options, but given—and I will hark back to the IRS experience, given the importance of getting that equipment manufactured, an early decision is necessary. For example, the Westinghouse equipment that is being tested, they have in the 10 years they have been manufacturing that thing, only made 100 of them. And they require some multiple of that to be produced in the next couple of years, a variation of it, because they have already identified things that would have to be done differently.

Regarding the FACT 80 equipment—if they have to start manufacturing additional cameras and all the associated hardware, I am concerned that they get on with it as quickly as possible. We have spoken to some of the manufacturers, both NCS, which is the company that acquired the Westinghouse division that manufactured the equipment, as well as Kodak, and they are saying, "They better hurry up and do something soon."

Mr. GARCIA. I was mentioning to my colleague, Mr. Hansen, about the lead time. I chaired the census in 1979 and 1980 and I thought by becoming chairman in 1979, I had so much time. I said, "Wow, we can really do a lot, you know, having it a full year ahead," but here it is 1985 and the panic button is already being pressed by those of us who are going to be overseeing the census of 1990.

I must tell you that I am glad that we are all in this together because I think the census needs a lot of help and I think that we have to give it to them really.

Mr. ANDERSON. Well, in response to your request, we are going to be monitoring very closely on-site around the country and here in Washington, sir, and give you real-time information.

Mr. GARCIA. We will be in Jersey City Saturday; we will be in Tampa in a couple of weeks. There are some questions, Mr. Anderson and Ms. Chelimsky, that we would like to submit to you. I hope you would get the response to us as quickly as possible.

We want to thank you very much for coming and sharing this moment with us.

Mr. ANDERSON. Thank you, Mr. Chairman.

Ms. CHELIMSKY. Thank you, it was a pleasure.

[Whereupon, at 12:20 p.m., the subcommittee was adjourned, to reconvene subject to the call of the Chair.]

[The prepared statement and subsequent questions follow:]

STATEMENT OF

WILLIAM J. ANDERSON

DIRECTOR, GENERAL GOVERNMENT DIVISION

Mr. Chairman and Members of the Subcommittee:

I am pleased to participate today in this hearing on the Census Bureau. I am accompanied by Ms. Eleanor Chelimsky and Mr. Jack Kaufman. Ms. Chelimsky is director of GAO's Program Evaluation and Methodology Division and Mr. Kaufman is responsible for supervising our audits at the Census Bureau. My comments will focus on the Bureau's preparations for the 1990 decennial census. In addition, I will provide the status of our work in assessing the evaluations of non-cash benefits for the purpose of measuring income.

As a prologue to current preparations for the 1990 census, I believe it is appropriate to briefly look back at the 1980 census. The 1980 census was by far the most expensive in history, costing about $1.1 billion. Even when inflation and increased population are considered, the cost of the 1980 census was twice the cost of the prior census. Moreover, considerable controversy surrounded the 1980 results. For example, about 50 law suits were filed by communities and groups contesting the results. Some plaintiffs contended that the results should be adjusted to compensate for census count errors. Many of these cases have not yet been decided. Although the actual head counts were reported on the date required by law, some critics of the census focused on the lack of timeliness in reporting some of the other census data results.

With this as a backdrop, we were encouraged to note the Bureau's stated goals for the 1990 census are to include the

following:

--conducting the 1990 census without increasing the per housing unit cost in 1980 dollars;

--expediting the availability of the data to the users;

--maintaining a high rate of overall coverage and improving the accuracy of small-area data while reducing the undercount differential for population groups and geographical areas; and

--striking an appropriate balance between the time it takes respondents to complete the questionnaire and the need for information by census data users.

We are also pleased that the Bureau plans to accelerate its testing activities to achieve its stated goals. For example, its first pretest is currently underway, about 1 year earlier than for the 1980 census. This accelerated schedule means that greater resource levels will be needed earlier in the census cycle, with the hope that it will produce a more effective, efficient, and economical census.

It remains to be seen whether the Bureau's goals will be achieved. To date, considerably more funds have been committed to the 1990 census than in a comparable period for the 1980 census. We also have some reservations and questions about the use of some of the early funding and about whether the Bureau is maximizing the opportunity and resources it now has. Thus far, the Bureau intends to spend through fiscal year 1986 about $90 million. This is considerably more than the $8 million spent through fiscal year 1976 for the 1980 census. The $90

million figure excludes the costs associated with the geographic support and data processing budget line items for fiscal years 1985 and 1986 totaling about $71 million.

We also have some questions about the Bureau's timetable for making decisions on the 1990 census. We are concerned that the Bureau may not have allowed sufficient time to obtain the most advantageous processing equipment for the 1990 census.

SHORTER "SHORT FORM" QUESTIONNAIRE NEEDED

In Jersey City, New Jersey, the Bureau is testing the use of a new two-stage process for administering questionnaires using a long and short form. For half of Jersey City, the Bureau will send a short form--similar to the one used in 1980--to every household. At a later time, the Bureau will send a long form to a one-in-five sample of this test group. For the other half of Jersey City, the Bureau will send a long form to one-fifth of the households and, simultaneously, a short form to the remaining households, similar to what was done in 1980.

Although we endorse the two-stage process using the short and long forms, we have strong reservations about the size and content of the short form used in the first stage. As we advocated in our May 5, 1976, report, Programs to Reduce the Decennial Census Undercount (GGD-76-72) and in our June 26, 1984, testimony to the subcommittee, the short form should be limited to just a few basic questions to obtain an accurate population count.

We believe the short form should be simpler and contain fewer questions than the one used in 1980 which contained a num-

ber of household questions extraneous to the basic count. For example, we believe that questions about plumbing facilities or the value and rent of housing units increase the complexity of the questionnaire and thus tend to discourage response. Moreover, with less information on the short form it could be processed more quickly and thus allow more time for Bureau and local officials to review the preliminary counts. In addition, processing costs could be reduced.

The decision on the content and format of the questionnaire also has an important influence on automation because of the workload considerations and automation options available. Without a decision on the general specifications of the questionnaire, the Bureau cannot make valid cost comparisons between feasible automation options. The Bureau's announced plans of deciding on the questionnaire in 1986 or later does not allow much opportunity to review automation options.

TIMELY AUTOMATION DECISIONS CRUCIAL

In the pretests, the Bureau is also evaluating some automation procedures and new technology, including procedures to account for the questionnaires as received (check-in) and to determine the completeness and consistency of the questionnaire responses (editing). In its Tampa, Florida, pretest, the Bureau is also testing a data-entry technology different than that used in the prior census. The questionnaire responses will be entered into computer files using a commercial optical mark reader. We are pleased to note the testing of the automated

check-in and editing procedures, but have reservations about the usefulness of the optical mark reader test.

According to Bureau specialists, the equipment being tested has some known limitations in connection with census use. The reading capability of the equipment is basically dependent on the use of lead pencil marks. To help overcome this limitation, the Bureau has supplied each prospective respondent with a number 2 pencil. As the mark reader also requires a special type of paper and ink, the equipment manufacturer is providing the paper and printing the questionnaires for the test. Because of the stringent specifications needed for the paper, changes in environmental conditions, particularly humidity, which can affect the size of the paper, can significantly affect the mark reader's capability. Commercial mark readers generally require flat unfolded pages, usually 8-1/2 by 11 inches. To accommodate this paper size constraint, the questionnaire for the Tampa pretest was physically reduced in size, thus reducing the per-page space for the questions. In early tests of the equipment at the Bureau's headquarters, Bureau technical personnel noted problems such as incorrect readings when the questionnaire responses (marks) were not precisely within the space provided or where there were erasures.

We have recently observed the early pretest operations of the optical reader in the Bureau's special processing location in Jeffersonville, Indiana. In this test, we noted that after the equipment was adjusted by the vendor's technical personnel and the climatic conditions stabilized by regulating the humid-

ity, the equipment performed very well. I might add that, although not expected to do so, the equipment even read marks made by colored pencils and ink pens.

In addition to having reservations about the optical mark reader being used in the Tampa pretest, we have reservations about the use of keying of the questionnaire responses in the pretests. In the pretests, only the short form questionnaire responses in the Tampa pretest will be read by the commercial optical mark reader. All other data which the Bureau plans to enter into its computer files will be keyed in. This appears to be a step backwards in technology and we wonder about the rationale and the purpose served. The Bureau's timetested method of data entry using its unique FACT 80 system which incorporated a film optical sensing device for input to computers and automated camera technology certainly seems to have been an advancement over keying for data entry. In fact, the Census Bureau and the Bureau of Standards jointly developed the forerunner of the FACT 80 system in the 1950's because they recognized that keying was too slow for the massive amounts of data collected in a decennial census.

If the Bureau decides to enter data by keying in 1990, Bureau experts have estimated that it would require as many as 14,000 machines. Moreover, the machine operators that would be employed would be temporary employees. Recruiting competent short-term staff has traditionally been a problem in a decennial census, and recruiting the machine operators needed would compound this problem.

We understand that the Bureau will be testing other automation system proposals in its planned 1986 pretests. Based on early planning, these systems, which feature a decentralized mode of processing, have merit. However, we are very concerned about the timetable for deciding on the preferred automation system for the 1990 census. We understand the Bureau will not decide on a system until late 1986.

Historically, the Bureau and the Department of Commerce have taken 4 to 5 years to make automation equipment available after its need was identified. This period was required to identify the needed equipment and develop specifications, request and evaluate proposals, contract for and install the hardware, develop and test software, and develop procedures and train staff. On the basis of that experience, the Bureau needs to start the acquisition and system development cycle no later than the spring of 1986 if the new equipment is to be available for the next census.

The vendor of the optical mark reader equipment currently being used in the pretest has proposed that its equipment could be tailored to the Bureau's unique requirements only if equipment modifications can be made. Thus, in proposing the development of a prototype, the vendor acknowledges that the optical mark reader currently being tested would not satisfy census requirements. This vendor believes that he can develop a census suitable optical mark reader for 1987 testing if he is given a research and development contract immediately. According to the vendor, there is not a sufficient commercial demand for such

equipment to justify the company's developmental work with its own funds.

If the Bureau committed itself to the vendor's proposal, 3 years would remain for the testing, fabrication, and installation of a sufficient number of readers for the actual census. The requirement for a specific number of readers has not been defined. One scenario calls for several hundred readers. However, the vendor in its 10-year manufacturing history has produced fewer than 100 of the readers being tested.

A representative of another prominent prospective vendor advised that a decision in late 1986 would just about rule out that company's involvement in the project because of his company's need for an 18 month prototype development period and a several year period for production.

Thus by planning to decide on the automation approach in late 1986, the Bureau will have backed itself into the position of deploying some form of the current FACT 80 system. The Bureau may now, in fact, be rapidly approaching the point where it will have no other option. Moreover, if it does not soon commit itself to begin to increase its inventory of cameras and related equipment for the FACT 80 system, it may not even have an adequate number of upgraded FACT 80 system equipment for 1990. Upgrading is necessary because some of the control mechanisms of the FACT 80 equipment are no longer manufactured, and consequently there would be no backup support in the event of break downs. Additionally, without upgrading, the Bureau would forego some opportunities available to it through advanced technology.

Should the Bureau decide to upgrade its FACT 80 system, considerable work would be needed. For example, the Bureau currently has only about 30 of the 60 cameras used in the 1980 census. All current system proposals suggest the need for 60 to 120 cameras. Acquiring that additional number of unique equipment through either in-house assembly or contractor fabrication and upgrading the existing equipment will take several years.

Another important decision the Bureau needs to make in the near future is the deployment of processing equipment. This deployment has a major influence on the Bureau's field organization and on the amount and type of equipment needed. More importantly, the number of offices where the equipment will be installed has tremendous influence on the overall cost of the census.

EFFECTIVELY INCREASING AND EVALUATING CENSUS COVERAGE QUESTIONABLE

Census coverage (completeness of count) which is the main focus of the decennial census, can be divided into two categories--obtaining the best count in the enumeration process and developing an acceptable method of adjusting for a substantiated error in the count. The Bureau spent many millions of dollars in the 1980 census on procedures specifically designed to improve the overall coverage and particularly to reduce the disproportionality of the historic undercount for the minority population groups. Based on the Bureau's own estimates, coverage improvement programs are among the most costly and lowest yielding operations it conducts during a census. Bureau analyses show that the overall coverage for the census improved,

but the disproportionality of the minority undercount, particularly for blacks, did not improve.

The Bureau's efforts to evaluate the coverage so that the error (difference between the census and the true population) could be distributed throughout the Nation for the 1980 census were not successful. Currently the Bureau believes that there is no acceptable method for distributing the national level undercount to subnational levels. Therefore the Bureau has established a special staff with specific responsibility to coordinate undercount measurement and adjustment research for the 1990 census.

Because of problems experienced in the past with coverage evaluation techniques, we are wary about the success of an acceptable 1990 adjustment method unless there is a breakthrough in the technology or methodology. With that in mind we made several recommendations in our report, Procedures to Adjust 1980 Census Counts Have Limitations (GGD-81-28, Dec. 24, 1980). Some of these, such as requiring the Commerce Secretary to keep the Congress apprised of his plans for making an adjustment, were incorporated in H.R. 5720 introduced in the last Congress by this subcommittee's former chairperson. We believed then, as we do now, that it was important for the Congress to be formally apprised of the Bureau's plans for adjustment prior to the 1990 census

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I will now discuss the progress our office has made in assessing the evaluations of non-cash benefits for the purpose of measuring income.

QUANTIFYING NONCASH BENEFITS AFFECTS POVERTY INDICATOR

The poverty indicator reported by the Bureau of the Census is used to determine eligibility and to allocate billions of dollars for public assistance, thus affecting millions of citizens. In addition, this index is used as one means of assessing national welfare: that is, a rise in the proportion of citizens living in poverty is interpreted as reason for concern, a decline as evidence of progress. The current official poverty indicator reflects only cash income. Recognizing the great expansion of noncash benefits such as medical care, food, and housing since 1965, a Congressional concern in 1980 prompted the Bureau of the Census to develop methods of quantifying their value. We have been asked by this subcommittee to examine these methods of quantification and to identify for the Congress the technical questions that need to be asked in order to learn more about their accuracy and fairness.

We have just begun our technical work. Even at the beginning, however, we have identified features of the proposed indicators that could lead to distortions in the general understanding of poverty in the United States. For example, the poverty rate for the elderly is greatly affected, in valuing noncash benefits, by the inclusion of medical care transfers. Adding the market value of medical care to income in 1979 reduces the number of elderly in poverty by 2.6 million in that year. However, about 28 percent of all Medicare payments are accounted for by services rendered to persons who die within a 12-month period. Since the valuation method for Medicare assigns an average benefit level to all program participants, the extensive

and expensive services provided to those who are in the terminal period of their lives are "credited" to the well-being of many others, who may have received no actual services during that 12 month. This not only could exaggerate the real benefits received but might also cause a change in the poverty status of some participants without a corresponding increase in their services. This concern and others are detailed in the technical appendix to our testimony, and we would be happy to answer questions about our initial observations.

In developing and demonstrating methods for valuing noncash benefits, the Bureau of the Census has been candid about their strengths and their limitations. These methods, which are currently being used by policy analysts, have not been comprehensively examined by a group independent of the Bureau. Our preliminary work reveals a number of areas where the procedures that would be used for each valuation technique that has been proposed may be subject to technical errors, and these may have a considerable, distorting influence on the derivation of poverty indicators and rates. A large number of individuals and families could be affected by the use of these calculations. For policy analyses that address issues involving the valuation of noncash benefits, the new methods are, at present, the best available. However, GAO believes it would be prudent to suspend major changes in policy, and decisions regarding eligibility and the distribution of funds, until these methods have been comprehensively examined.

This concludes my prepared statement, Mr. Chairman. We will be happy to respond to any questions.

Technical Appendix: Issues in Valuing Noncash Benefits

This appendix summarizes GAO's ongoing work in the area of valuing noncash benefits. There are, of course, many possible methods for quantifying these benefits. Our work focuses on the issue of how these methods are constructed. We are not, however, developing formulas for quantifying noncash benefits. Rather, we are devising an evaluation methodology for assessing approaches that have been developed by others.

In 1980 Congressional concern prompted the Bureau of the Census to develop a way of representing the value of noncash benefits in its poverty indicators. In the past, these have not been counted in eligibility determinations or in official reports on poverty in the United States, although noncash benefits such as food stamps, housing assistance, Medicare, and Medicaid made up 30 percent of federal assistance to low income persons in 1982. Devising a fair way of valuing noncash assistance is technically challenging. Any proposal is likely to be controversial because of its different effects on different groups of people: that is, when we consider who gains and who loses.

This subcommittee has asked GAO to develop a means of objectively evaluating the technical adequacy and fairness of the proposed valuation methods. We were also asked to consider, in detail, the current valuation techniques being developed by the Bureau of the Census. We are in an early phase of this work. This is, therefore, a preliminary report on what have emerged as important evaluative questions to be asked about proposed valuation techniques.

BACKGROUND ISSUES

The manner in which the value of noncash benefits is represented depends heavily on the purposes for which the poverty index is used and the way it is interpreted. The poverty index is used for three major interdependent purposes. Each could imply a different approach to quantifying noncash benefits. First, some Federal programs (e.g., Maternal and Child Health Services Block Grants and the Head Start program) use a distribution formula based on the poverty index computed by the Census Bureau. A second purpose is to base benefit eligibility for families and individuals on this indicator of need. In addition to its application in distributing billions of dollars, a third purpose of the poverty index is to serve as a primary measure of national welfare: increases in the proportions of our citizens whose incomes fall below the poverty threshold are typically taken as reasons for concern, and decreases in these proportions are cited as evidence of improvement in the condition of life. An evaluation methodology must take into account these different purposes. For example, if noncash benefits are included in program eligibility determinations, the accuracy of the benefit levels assigned to particular individuals may be more important than when they are included as part of the distribution formulae.

Thus far, efforts to quantify noncash benefits have been made most extensively in the area of measuring national welfare, where two persistent issues have arisen. First, while it is clear that the definition of income is expanded when it includes noncash benefits, it is not clear which benefits should be

included in the definition. Some analysts have argued that some benefits (e.g., medical care) are not intended to close the poverty gap but to provide services that are otherwise not available. Other analysts have argued for accounting for all forms of federal and nonfederal benefits, dollars and services for the poor and the nonpoor. The broader the definition of income -- whether it includes wages or cash assistance or the value of in-kind transfers or all three -- the more the poverty rate can be expected to decline.

The second issue concerns the appropriateness of altering the poverty threshold[1] if in-kind benefits are added to the definition of income. That it is appropriate is advocated by some analysts for two reasons: to ensure that the poverty "threshold" corresponds to some "real" poverty level and to avoid definitional changes that would vitiate comparisons between one year and another. Where to set the threshold is a question that has been debated for at least two decades. A more recent question is: What changes in the threshold should be made if noncash benefits are included in the definition of income? We do not expect to resolve these questions in our work. Rather, we hope to address two problems that pertain to all methods of measuring poverty: First, What conceptual, procedural, or statistical aspects of the methods distort the estimates of poverty that are derived from them? Second, If there are factors

[1]In 1983 the proverty threshold for a family of four was $10,178.

that distort the estimates, how big is their influence on the poverty rate?

COMMON VALUATION METHODS

Acknowledging that there is no generally agreed upon way of quantifying the cash value of noncash benefits, the Bureau of the Census has developed three alternative methods spelling out the theoretical foundations. They are referred to as the "market value", "recipient value" and "poverty budget share" methods. The Bureau of the Census also demonstrated how these methods could be used to re-estimate the poverty rate using existing data on program participation, income, and program costs from various sources. Only selected assistance areas (i.e., housing, food, and health care) were included in these demonstrations.

In theory, the three methods differ in that they use different concepts of how federal assistance can be valued. The market value method considers the value of noncash benefits to be equal in cash to the private market purchasing power that would be needed to buy the same goods and services that are consumed. The recipient value method employs the concept of the beneficiary's own valuation of benefits: the equivalent of a noncash benefit is the cash the individual would trade for it. Under various conditions, the recipient value method will produce lower cash values than the market value method. The third method, the poverty budget share method, limits benefit values to the observed consumption levels of people near the poverty line.

In its original work, the Bureau of the Census used all three conceptual schemes to derive benefit levels for each of the

three assistance areas--food, housing and medical care. Depending on which method is used and which noncash benefits are included in the definition of income (e.g., money income alone; money income + housing + food; money income + housing + food + medical care), the overall poverty rate in 1979 falls from a rate of 11.1 percent (considering money income only) to as low as 6.4 percent (using the market value for food, medical and housing benefits). That is, the poverty rate declines by as much as 42.3 percent when the market value of noncash benefits is considered. When the poverty budget share and recipient value methods are used, the poverty rate declines 20.1 and 26.7 percent, respectively. What are the relevant questions that should be asked about these methods and the different results they produce?

ILLUSTRATIVE EVALUATION QUESTIONS

The list of technical issues about the adequacy of these valuation methods can be classified into three general evaluative questions:

--How valid are the methods? That is, do they accurately measure what they are intended to measure?

--Do the assigned benefit values derived by each method meaningfully represent the diverse circumstances of individuals?

--What are the known technical problems in acquiring the information needed in order to use each method?

One way of thinking about these questions is in terms of how well the valuation technique corresponds to the actual benefit levels individuals receive.

To establish this correspondence, two questions can be raised. First, we might ask, are the valuation methods faithfully represented by the computational procedures that are employed? Second, Do the computational procedures reasonably approximate the level of benefits received by individuals? In what follows, we describe a number of problems that can arise when there is a lack of correspondence at the conceptual, procedural, and statistical levels.

Question 1: How valid are the methods?

It is not uncommon to find that computations do not correspond very well to the conceptual definition of poverty on which they are based. One reason for this is the many constraints, such as the costs and availability of information, that are encountered in making the computations. For example, the recipient value method is intended to assess the beneficiaries' own valuation of a benefit--that is, its utility. Utility is difficult to establish, particularly in a national survey. Acknowledging this difficulty, the Bureau of the Census has substituted a simpler method for establishing utility--the identification of normal expenditures at different income levels. This procedure is therefore only an approximation to the theoretical notion underlying the recipient value method, which means that the computation may misrepresent the notion of an individual's utility function. In addition, this procedure for establishing utility may be subject to a variety of technical shortcomings. In particular, since the normal expenditure levels that are used to estimate the value of the benefit are derived from individuals who do not receive

the benefit but have incomes similar to the income of those who do, these individuals are likely to be in different circumstances from those who receive the benefit. This noncomparability means that the values that are used may be biased--that is, the values may be larger or smaller than the true recipient value. Whether this bias is present and, if it is, how much it distorts the resulting poverty rate has not been rigorously examined. Yet this problem is extremely important in evaluating the validity of the recipient value method. If this method is to be justified as valuing noncash benefits in terms of what individuals believe they are worth, it is essential to demonstrate that the actual procedures faithfully represent their perspectives.

Question 2: Do the assigned values represent diverse circumstances?

The computational procedures used to assign values to each of several noncash benefits may obscure some important distinctions between categories of individuals. For example, in a valuation of medical benefits, the individual is the basic unit of analysis. In computing these benefits, the average costs within each state for individuals in four risk categories are applied to the family composition as reported in the Current Population Survey. When some very high medical costs are averaged with many low costs, this tends to produce a higher market value of the medical benefit than actually received for those individuals with no or low medical expenditures. Depending upon the actual distribution of expenditures, averaging across individuals who have high and low consumption patterns may seem to remove some

households from poverty although they might not have received any medical assistance at all.

If the value of medical care transfers is to be quantified, it is important to portray accurately the levels of benefits that individuals actually receive. To do this, alternative procedures may be necessary. For example, it is possible to employ alternative summary values rather than using average benefits, which are influenced by the presence of high medical expenditures. In particular, the median benefit level might be useful. This value -- the point that divides a distribution of values into two equal halves -- is not as sensitive to the presence of high medical expenditures as is the calculation of an average.

Other, more technical computational procedures (such as weighting and clustering individuals according to consumption patterns) could also represent more faithfully the distribution of medical assistance as it is provided. The potential importance of alternative procedures is demonstrated in the accompanying table. The numbers in the table are hypothetical and have been summed to illustrate how considering the distribution of actual expenses (per family) instead of averages influences the poverty indicator.

In this simple example, 50 families have incomes below the poverty level, established for the example at $12,000. The average medical benefit is $3000. When it is added to each family's income, 18 families or 36 percent are still below the poverty line. However, when each family's actual medical benefit is added to its income, 45 families or 90 percent remain below

Simulated Distribution of Family Income and Medical Benefit Valuation

Family number	Family annual income	Actual medical benefit	Average medical benefit	Family Income Plus Actual medical benefit	Poverty level	Family Income average medical benefit
1	$11,000	0	$3,000	$11,000	$12,000	$14,000*
2	9,100	$2,000		11,100		12,100*
3	8,400	2,500		10,900		11,400
4	8,600	800		9,400		11,600
5	10,000	0		10,000		13,000*
6	6,400	4,000		10,400		9,400
7	7,500	400		7,900		10,500
8	9,800	0		9,800		12,800*
9	9,200	600		9,800		12,200*
10	11,700	900		12,600*		14,700*
11	9,300	0		9,300		12,300*
12	8,900	500		9,400		11,900
13	10,500	100,000		110,500*		13,500*
14	11,000	100		11,100		14,000*
15	9,200	0		9,200		12,200*
16	7,900	400		8,300		10,900
17	11,100	0		11,100		14,100*
18	9,900	300		10,200		12,900*
19	10,100	3,000		13,100*		13,100*
20	10,000	200		10,200		13,000*
21	9,600	2,000		11,600		12,600*
22	9,400	200		9,600		12,400*
23	8,900	0		8,900		11,400
24	10,400	100		10,500		13,400*
25	11,000	3,500		14,500*		14,000*
26	9,100	2,500		11,600		12,100*
27	10,600	800		11,400		13,600*
28	9,100	0		9,100		12,100*
29	8,500	800		9,300		11,500
30	6,900	1,800		8,700		9,900
31	9,700	1,000		10,700		12,700*
32	10,600	0		10,600		13,600*
33	8,800	600		9,400		11,800
34	8,100	400		8,500		11,100
35	10,300	0		10,300		13,300*
36	7,800	2,000		9,800		10,800
37	9,400	1,000		10,400		12,400*
38	7,800	100		7,900		10,800
39	11,000	0		11,000		14,000*
40	10,300	700		11,000		13,300*
41	9,300	0		9,300		12,300*
42	8,100	800		8,900		11,100
43	8,900	2,200		11,100		11,900
44	10,200	500		10,700		13,200*
45	9,200	400		9,600		12,200*
46	7,800	3,000		10,800		10,800
47	11,400	500		11,900		14,400*
48	10,900	0		10,900		13,900*
49	7,600	4,000		11,600		10,600
50	8,300	5,400		13,700*		11,300

Summary, below poverty line: 45/50=90% 18/50=36%

*From below to above the poverty line.

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the poverty line. Comparing those two methods, we see that 27 more families would be pushed above the poverty line if the average medical benefit is applied, but 12 of these families would not have received any medical benefits at all. In our example, the median medical benefit is $500. If we substitute the median for the average, adding the median to each family's income, 49 families or 98 percent would be classified as in poverty, which differs very little from the figures that are derived by using money income alone for classifying poverty. Regardless of which procedure is used -- the distribution of actual values or the median benefit level -- we see that using alternatives to averages can make a substantial difference in the classification of individuals in or out of poverty.

A striking example of how different circumstances can influence the value of medical benefits can be illustrated by examining Medicare expenditures. About 28 percent of total Medicare costs are incurred during the 12 months preceding death. Applying the market value method to derive a benefit level, without taking into account the inherent differences between the could ascribe a greater market value to these benefits than is warranted.

The Bureau of the Census has recognized this general problem of the qualitative difference in various circumstances in the area of benefits for institutionalized versus noninstitutionalized persons. The Bureau calculates the cash value of health benefits separately, alternatively including and excluding the costs of institutionalized care which explicitly include food, housing, and custodial services.

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This calculation method appears to be sound practice, but other similar differences in circumstances also need to be considered.

Question 3: What are the known technical problems in acquiring the information needed in order to use each method?

In its yearly estimate of the official poverty rate, the Bureau of the Census conducts, in March, the large-scale Current Population Survey. In this survey, the Bureau interviews a nationally representative sample of about 60,000 households to determine their characteristics, income level, and program participation. As with any survey, a variety of technical problems can threaten its accuracy. For example, since the survey results are based on a sample of households, it is possible that the results may not reflect the actual state of affairs because of the variability of those who are included in the sample--known as "sampling error." The potential discrepancy between the sample and the entire population depends on the size of the sample: as the sample size grows, the sampling error shrinks.

For the Current Population Survey, the sample size is adequate for obtaining a precise indication of the national poverty rate, but it is too small and imprecise for estimating poverty rates in a region or a state. Nevertheless, state medical costs are imputed for valuing health benefits. The influence of mixing these two sources of data has not been formally examined. In order to obtain precise estimates of poverty at the state level, the sample size for the Current

Population Survey would have to be increased substantially (as would its operating budget).

A second class of factors beyond sampling error influences the overall quality of information derived from surveys. These factors are referred to collectively as "nonsampling errors" and include interviewing irregularities, bias inherent in respondents' answers (for example, an unwillingness to disclose income levels), failure to carry out the sampling plan (for example, inadvertently failing to list specific households), and the inappropriateness of the sampling plan (for example, the undercount problem). Many of these factors have been assessed by the Bureau of the Census. Here we provide one simple illustration of the problems they generate for estimating the poverty rate.

It is well known that some individuals do not answer interview questions about income in the Current Population Survey. Further, the instances of not responding have increased over the past decades. The Bureau attempts to adjust for the influence of nonresponse by estimating the value, based on the responses of the individuals who do respond. The adequacy of this adjustment depends on how well the estimate approximates the actual income level of those who do respond. In order to find this out, Census has conducted a series of investigations that link estimated values with IRS records. The results suggest that for some income groups, in particular part-time and part-year employees, the method of accommodating nonresponse is not adequate. For example, to the extent that low-income persons are more likely to work part-time, more error is introduced into Current Population Survey data from them.

These and other sources of error create uncertainty about the merit of how poverty is estimated. Important questions that need further examination include the extent to which these individual sources of error influence the poverty rate, whether they compensate for one another (that is, whether one source of error increases the poverty rate and a different source reduces it), and their cumulative effect.

FUTURE WORK

During the next 6 to 9 months, we plan to refine the questions that should be considered in evaluating valuation techniques for quantifying noncash benefits. This work will also focus on determining the applicability of our evaluation methodology to new methods of quantifying noncash benefits. Further, we will attempt to determine, through information synthesis, reanalysis, and simulations, the relative importance of the evaluative questions to the valuation techniques proposed by the Bureau of the Census. The importance of each aspect of the methodology as it applies to the three purposes of the poverty indicator -- distributing benefits, determining eligibility for the, and counting the poor order to measure national welfare-- will also be examined and highlighted.

OBSERVATIONS

In developing and demonstrating methods for valuing noncash benefits, the Bureau of the Census has been candid about the limitations as well as the strengths of these methods. Nevertheless, the methods are currently being used by policy analysts, even though they have not been comprehensively examined

by a group independent of their developers. In response to the Congressional request, our preliminary work reveals that there are a number of areas where the procedures used for each valuation technique may be subject to technical errors and that these may have a considerable, distorting influence on poverty indicators and rates. It is important to identify these errors because a large number of individuals and families could be affected by the results of these calculations. For policy analyses, these methods, at present, are the best available for addressing issues involving the valuation of noncash benefits. However, GAO believes that before major changes in policy are made and before decisions are made regarding eligibility and the distribution of funds, it would be prudent to examine these methods comprehensively.

RESPONSES TO FOLLOWUP QUESTIONS
APRIL 18, 1985 HEARING BEFORE THE
SUBCOMMITTEE ON CENSUS AND POPULATION
COMMITTEE ON POST OFFICE AND CIVIL SERVICE

Q. 1. Out of all the studies GAO has done to evaluate the 1990 Decennial census, in short, would you say that Census Bureau is on target with its plans to carry out the 1990 Census in a cost-effective manner?

A. We believe that the Bureau's decision dates for automation and the questionnaire to be used for the 1990 Census are too late for the most effective and least costly census. Making the basic decisions on these matters in late 1986 and thereafter may result in hasty subsequent implementation actions which could impair the conduct of an effective and economical census.

Q. 2. What are the ways in which the Bureau can expedite its decisionmaking process, especially decisions on processing equipment, so that the 1990 Census would be carried out in a cost-effective manner?

A. One way to expedite the decision on processing equipment is to test euipment in the immediate future and not wait until the Spring of 1986 when the next full pretest is scheduled. We believe that a formal pretest is not necessary to test potential census processing equipment. The key is that the equipment decision must be made early enough to enable the prospective vendors to adapt their equipment to census needs or, if the Bureau decides to use its FACT 80 equipment in 1990, to enable the Bureau to modify and upgrade this equipment.

Q. 3. It is my understanding that several years ago, GAO submitted to this subcommittee a report stating that they estimated the 1990 Decennial Census would cost 4

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billion dollars. We are in 1985, do you still feel that 4 billion dollars is a realistic figure?

A. The $4 billion estimate was predicated on a double digit inflation rate that the country had experienced between 1971 to 1980. If the much lower rate of inflation that the country has experienced in the past few years continues, the Bureau should be able, all other factors remaining somewhat similar to the 1980 Census, to conduct the 1990 Census for under $4 billion. How much lower will depend on the Bureau's successful use of advanced technology, questionnaire simplification, the labor conditions, and the nation's receptiveness to a census in 1990.

Q. 4. Since the Bureau maintains that they must consider the reliability and availability of equipment for computer use, do you feel this would be justification for the delay in setting up a full computer operation or do you still feel that a delay in putting the census under full automation may be detrimental to a successful 1990 Census?

A. We believe the Bureau is right in taking the position that it must be assured of the availability of reliable equipment for a decennial census. There is no time for a redo. On the otherhand, there is equipment currently available which should satisfy most of the Bureau's automation needs. The Bureau has to make a decision rather quickly which kind of automation equipment it will use. It has to identify the basic technology and modify the equipment to its unique requirements, and it has to decide on the specific equipment configuration and deployment. It cannot hope for a major breakthrough in technology at this point in the planning cycle for the 1990 Census.

Q. 5. Is it your opinion that the Census Bureau may not have adequate time to come on line with their automation if

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they wait until 1986 to make a decision. How would you resolve this problem?

A. The Bureau has opted not to decide upon its data entry technology until September 1986. Apparently this decision is predicated on its desire to fully evaluate the data processing results of the 1985 and 1986 pretests. We believe that the September 1986 date will not allow sufficient time to do all the things necessary to ensure a smooth running, automated operation for the 1990 Census. Our position is based on our review of past automation installation at the Census Bureau and the Department of Commerce. We found that it has taken 4 to 5 years to fully implement automation equipment after its need was identified. This period was required for such activities as developing specifications requesting and evaluating proposals, contracting for and installing hardware, developing and testing software, developing procedures and training staff. On the basis of that experience, the Bureau needs to start the acquisition and system development cycle no later than the Spring of 1986.

At this point, a couple of options are available to make up for lost time. The Bureau could evaluate prospective equipment by employing it in a mock census test prior to the 1986 pretest. A full pretest is not necessary to test the equipment. Another option for the Bureau is to proceed with modification work and some fabrication of FACT 80 system equipment. This would not entail a major investment. Considering the risk of not having a complete processing system if the Bureau waits too long in its evaluations of other proposed equipment, the investment warrants serious consideration.

Q. 6. In your opinion does the technology exist presently to make an adequate decision regarding the type of automation the Census Bureau should be using? If you have recommendation, have you presented it to the Census Bureau?

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A. Both the Bureau's FACT 80 system, with modification or some form of optical mark reading system are viable options for the 1990 census data entry process. Testing these options, defining the particular system, and deciding on the specific configuration and deployment should be accomplished within the next year. We are opposed to data keying for the entry of the basic questionnaire information. Entering the data by keying is one of the options that the Bureau is currently considering. In this regard we have formally expressed our opposition to data keying in our testimony presented to the subcommittee on April 18, 1985.

Q. 7. Do you feel that the controversy over the 1985 pretest situation in New Jersey will be indicative of problems the Bureau will encounter with the 1990 questionnaire form?

In your opinion, do you believe it would be in the best interest of the Census Bureau to have a more simplified questionnaire and still obtain the desired information upon which to base a population count?

A. Jersey City is representative of many inner city areas in which the Bureau has historically had difficulties in obtaining good mail response rates. Also for these types of areas, the Bureau has experienced undercounts. For these reasons and others, GAO has advocated a simplified questionnaire with the primary purpose of collecting population data.

Q. 8. As you know, undercount has been a problem that we had to face in recent decennial census, do you feel that the Bureau's outreach program and advertising campaign that they anticipate using in the 1990 Decennial Census will produce a minimum undercount?

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A. We believe the Bureau's advertising campaign for the 1980 Census was well done, and since it was performed through the Advertising Council, it was conducted at a minimal cost. We understand that the Bureau plans to use the same approach for the 1980 Census. The outreach activity is a contributing feature to the census promotion program. If well managed and directed, outreach can contribute to a good population coverage. The Bureau has started its outreach program at least one year earlier for the 1990 Census than for the 1980 Census.

A good promotion program is very helpful in producing a good count. Other factors also have a bearing on the coverage, some such as respect for the establishment and patriotism at the time of the census, cannot be controlled by the Census Bureau. The extent to which the promotion campaign can overcome negative establishment or patriotism attitudes can go a long way in reducing the undercount.

QUESTIONS FOR GAO ON NONCASH BENEFITS

1. How adequate a vehicle will the Bureau's conference be in addressing the issue of evaluating noncash benefits in the measurement of income, especially considering the possible ramifications on the poverty statistics?

GAO'S RESPONSE TO THE SUBCOMMITTEE QUESTION

Assessing the adequacy of the conference proposed by the Bureau of the Census depends on:

1. The Bureau's goals or purposes for holding the conference;
2. The content, format and structure of the conference; and
3. The extent to which other assessment activities have been scheduled or are underway for examining the strengths and limitations of methods for quantifying noncash benefits.

The Proposed Conference

Purpose. The Bureau of the Census has proposed a conference, spanning one full and two partial days, to be held sometime later this year. The stated purpose of the conference is to bring individuals together to explore with the Census Bureau ways to measure the receipt and value of noncash benefits. Attendees are to be representative of persons with technical and nontechnical expertise in the collection, dissemination and interpretation of income and poverty statistics.

Content. The tentative outline suggests that four topics will be explored. They are (1) the statistical definition of income (primarily focused on determining which noncash benefits should be included in the definition), (2) conceptual and practical problems associated with the current methods of quantifying noncash benefits, (3) the statistical comparability of alternative methodologies for determining the receipt and value of noncash benefits, and (4) the use of poverty statistics in federal laws. One invited paper and two discussants are proposed for each topical area.

Format and structure. Following an evening introductory session, papers on the first three topics will be presented in one session (the morning of "Day 2"). Concurrent group discussions on each topic will be held that afternoon and an open discussion is scheduled for the evening. The fourth topic is to be presented and discussed the following morning ("Day 3"). Thus, five sessions are planned to address the four topics. If we assume that each of the scheduled sessions is about three hours in length, roughly 15 hours will be devoted to these four complex topic areas, an average of about four hours per topic area.

Other assessment plans. We are not aware of what other plans, beyond this conference, the Bureau of the Census may have for examining their methods for quantifying noncash benefits. However, if no other assessment strategies are initiated or

ongoing, it is clear that the conference's adequacy as a means of understanding the conceptual, practical and political issues associated with quantifying the recipiency and value of noncash benefits takes on enhanced importance.

Comments on The Conference Plans

This conference has been in the planning stage for some time. We believe it is important that it be held as soon as is feasible. For reasons outlined below, we also believe some follow-up will be needed. Conferences are a useful activity for disseminating information, exchanging ideas, and drawing together diverse groups of individuals with common interests. The format, structure and content of the proposed conference seem sound for these purposes, but limited as a complete assessment for reasons that follow.

Time allocations. The topical areas proposed by the Bureau are technical in nature and we question how much information can be transmitted and critically discussed within the allocated time. Three papers, along with the remarks of as many as six discussants (two for each paper), are to be presented in a single session. If each discussant is permitted ten minutes and the audience is allowed 10 minutes for questions, the speaker would have about thirty minutes to summarize his/her presentation. We suspect this format would yield a superficial treatment of the issues within each topical area.

Partial participation or exposure. While three concurrent group discussions are scheduled after these presentations, each attendee can participate in only one of these discussions. Many of the issues associated with each of the topical areas overlap, to some degree, with issues in other topical areas. However, other issues are unique to the particular topic and some issues are conditional on questions raised in other topical areas. Thus the insights that can be presented by the attendees cannot be as full as if they had had an opportunity to comment on all papers.

Representation of views. In the outline for the conference, it appears that four individuals will be invited to present papers and as many as eight discussants will be chosen. It is unclear how these selections will be made, but even with 12 participants, it will be difficult to get a wide enough array of perspectives on each topic. In follow-up, it may be possible to solicit additional papers from interested parties. To ensure that papers meet the Bureau of the Census standards for quality, guidelines could be specified and a selection panel could be formed. This format would provide a way of encouraging other researchers and methodologists, who are independent of the Bureau of the Census, to present their views, evidence, and alternative conceptualizations.

Depth of coverage. The discussants are central to the presentations. While we are quite sure that the Bureau of the Census will invite the most qualified individuals they can find

to prepare papers on the major topical areas, to ensure that a balanced perspective is attained, one that is technically sound and covers the salient issues, discussants should be chosen carefully. A panel of outside reviewers could also serve as a pre-conference quality assurance mechanism.

Representativeness of attendees. The Bureau appears to be making serious efforts to ensure the representativeness of attendees and this is important since the failure to include important disciplines and stakeholders could jeopardize the credibility of the conference. But the universe of individuals who may be seriously interested in the topics of this conference is difficult to enumerate. Rather than limiting attendance to the invitation list, it may be sensible to consider publicizing the conference as open to all interested parties. This would free the Bureau of the Census of the burden of ensuring balanced representation of all perspectives. If this is not feasible due to limits on space, a follow-up open meeting might be considered.

Content of the proposed agenda. It is probably not possible on one agenda to include all relevant topics. As a follow up, soliciting views of individuals or groups from various perspectives could help identify these omitted topics. For example, one such topic might be the use of statistics in planning and targeting government programs. An alternative might be opening up the conference planning activities (e.g.,

having the agenda reviewed by individuals outside the Bureau of the Census) or scheduling an "extra-topics" session may avoid prematurely attenuating the range of discussion.

Dissemination. Preparing and disseminating proceedings of the conference is a very good idea. Of course, the utility of the proceedings depends on what is included. Since a major purpose of the conference is to obtain input from individuals outside the Bureau, including the summary reports derived from the concurrent sessions may serve as a way to get the issues that are raised "on-the-record". To ensure that all sides are represented, divergent views of others could be incorporated as part of a "minority opinion". Another option which could serve as a record of the issues and concerns raised by attendees could be to make arrangements to obtain transcripts of the discussions. These could be analyzed at a later date as a means of capturing the diversity of ideas that are generated.

The Need For Additional Assessment Strategies

We believe that the conference will serve as a valuable forum for identifying the possible areas of concern. If adequate progress is to be made toward sorting out real from potential problems, however, follow-up activities may need to be considered. Perhaps it would be possible to create incentives to engage researchers and outside methodologists in assessing the influence of problems that are identified at the conference.

Our principal concern is that some complex technical issues may not be resolved without conducting additional empirical investigations. Further, the use of statistical procedures entails making numerous assumptions about the issues (e.g., the income concept) under consideration and the methodologies that are used. It is unlikely that one group of researchers possess the necessary resources to conduct a comprehensive assessment. Decentralizing this responsibility by engaging multiple, independent research groups is one approach that has gained considerable support from the research and evaluation communities.

Summary

In sum, having considered the conference outlined by the Bureau of the Census, we believe that conferences can raise questions more successfully than answer them, so expectations should be realistic. In order to adequately address the issues of poverty measurement and the valuation of noncash benefits, a more technical assessment and a more open approach are needed with respect to the conference itself and the follow-up activities.